

Our Case No. 10342/13

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
APPLICATION FOR UNITED STATES LETTERS PATENT

INVENTOR: Harry Gottlieb

TITLE: Methods for Identifying Cells in a Path in
a Flowchart and for Synchronizing
Graphical and Textual Views of a
Flowchart

ATTORNEY: Joseph F. Hetz
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Methods for Identifying Cells in a Path in a Flowchart and for Synchronizing Graphical and Textual Views of a Flowchart

Reference to Computer Program Listing Appendix

This application contains one compact disc submitted in duplicate. The material on that compact disc is hereby incorporated by reference. The following is a listing of the names of the files on the compact disc, their dates of creation, and their sizes in bytes.

Volume in drive F is 011228_1335

Volume Serial Number is 7635-063B

Directory of F:\Send\docs

12/28/2001 01:37p	1,420	ReadMe.txt
12/28/2001 12:51p	2,663	TWiki _ Lab _ AudioMoment.mht
12/28/2001 12:51p	3,118	TWiki _ Lab _ AudioVersion.mht
12/28/2001 12:51p	25,715	TWiki _ Lab _ ConditionCell.mht
12/28/2001 12:51p	3,386	TWiki _ Lab _ CueCard.mht
12/28/2001 12:51p	15,237	TWiki _ Lab _ DialogueCell.mht
12/28/2001 12:51p	17,114	TWiki _ Lab _ FlowchartScriptWindow.mht
12/28/2001 12:51p	4,093	TWiki _ Lab _ GotoCell.mht
12/28/2001 12:51p	31,354	TWiki _ Lab _ MediaWindow.mht
12/28/2001 12:51p	4,713	TWiki _ Lab _ PlaybackWindow.mht
12/28/2001 01:31p	4,239	TWiki _ Lab _ UberToolManual.mht
11 File(s)	113,052	bytes

Directory of F:\Send\ExtLibraries\graphviz-1.7.7

12/28/2001 12:51p	19,004	aclocal.m4
12/28/2001 12:51p	860	AUTHORS

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12/28/2001 12:51p	1,747 autogen.sh
12/28/2001 12:51p	5,424 ChangeLog
12/28/2001 12:51p	3,780 config.cache
12/28/2001 12:51p	32,349 config.guess
12/28/2001 12:51p	16,295 config.log
12/28/2001 12:51p	1,295 Config.mk.linux.i386
12/28/2001 12:51p	1,269 Config.mk.sgi.mips3
12/28/2001 12:51p	19,637 config.status
12/28/2001 12:51p	25,767 config.sub
12/28/2001 12:51p	162,205 CONFIGURE
12/28/2001 12:51p	16,756 configure.in
12/28/2001 12:51p	20,205 COPYING
12/28/2001 12:51p	2,548 FAQ.txt
12/28/2001 12:51p	10,967 graphviz.spec
12/28/2001 12:51p	10,929 graphviz.spec.in
12/28/2001 12:51p	3,127 gvconfig.h
12/28/2001 12:51p	2,866 gvconfig.h.IN
12/28/2001 12:51p	8,064 INSTALL
12/28/2001 12:51p	5,849 install-sh
12/28/2001 12:51p	124,781 libtool
12/28/2001 12:51p	99,548 ltconfig
12/28/2001 12:51p	114,545 ltmain.sh
12/28/2001 12:51p	280 Makeargs
12/28/2001 12:51p	16,270 Makefile
12/28/2001 12:51p	772 Makefile.am
12/28/2001 12:51p	16,527 Makefile.IN
12/28/2001 12:51p	6,960 MINTERMS.txt
12/28/2001 12:51p	6,473 missing
12/28/2001 12:51p	762 mkinstalldirs
12/28/2001 12:51p	4,074 NEWS

12/28/2001 12:51p	417 nmakefile
12/28/2001 12:51p	141 README
12/28/2001 12:51p	11 stamp-h
12/28/2001 12:51p	11 stamp-h.in

5 36 File(s) 762,515 bytes

Directory of F:\Send\ExtLibraries\graphviz-1.7.7\agraph

12/28/2001 12:51p	1,280 agerror.c
12/28/2001 12:51p	5,114 aghdr.h
12/28/2001 12:51p	18,912 agraph.3
12/28/2001 12:51p	14,773 agraph.h
12/28/2001 12:51p	2,292 apply.c
12/28/2001 12:51p	10,278 attr.c
12/28/2001 12:51p	9,616 cmpnd.c
12/28/2001 12:51p	1,260 dotdge.c
12/28/2001 12:51p	9,639 edge.c
12/28/2001 12:51p	227 fixheader
12/28/2001 12:51p	1,221 flatten.c
12/28/2001 12:51p	39,722 grammar.c
12/28/2001 12:51p	8,064 grammar.grammar
12/28/2001 12:51p	324 grammar.h
12/28/2001 12:51p	11,069 grammar.y
12/28/2001 12:51p	5,019 graph.c
12/28/2001 12:51p	3,192 id.c
12/28/2001 12:51p	4,587 imap.c
12/28/2001 12:51p	929 io.c
12/28/2001 12:51p	1,963 main.c
12/28/2001 12:51p	13,107 Makefile
12/28/2001 12:51p	685 Makefile.am

12/28/2001 12:51p

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12/28/2001 12:51p 13,656 Makefile.IN
 12/28/2001 12:51p 69 malloc.h
 12/28/2001 12:51p 2,882 mem.c
 12/28/2001 12:51p 842 nmakefile
 5 12/28/2001 12:51p 5,824 node.c
 12/28/2001 12:51p 5,650 obj.c
 12/28/2001 12:51p 5,418 pend.c
 12/28/2001 12:51p 44 README
 12/28/2001 12:51p 5,938 rec.c
 10 12/28/2001 12:51p 2,808 refstr.c
 12/28/2001 12:51p 44,702 scan.c
 12/28/2001 12:51p 3,250 scan.l
 12/28/2001 12:51p 2,274 subg.c
 12/28/2001 12:51p 1,260 tester.c
 12/28/2001 12:51p 2,021 utils.c
 12/28/2001 12:51p 881 vmstub.h
 12/28/2001 12:51p 10,616 write.c
 39 File(s) 271,408 bytes

Directory of F:\Send\ExtLibraries\graphviz-1.7.7\agutil

12/28/2001 12:51p 455 agutil.h
 12/28/2001 12:51p 740 dynattr.c
 12/28/2001 12:51p 10,707 Makefile
 25 12/28/2001 12:51p 276 Makefile.am
 12/28/2001 12:51p 11,241 Makefile.in
 12/28/2001 12:51p 713 nodeq.c
 6 File(s) 24,132 bytes

Directory of F:\Send\ExtLibraries\graphviz-1.7.7\cdt

12/28/2001 12:51p 3,394 ast_common.h
 12/28/2001 12:51p 19,591 cdt.3
 12/28/2001 12:51p 8,301 cdt.h
 5 12/28/2001 12:51p 1,293 dtclose.c
 12/28/2001 12:51p 2,886 dtdisc.c
 12/28/2001 12:51p 1,250 dtextract.c
 12/28/2001 12:51p 1,698 dtflatten.c
 12/28/2001 12:51p 7,251 dthash.c
 10 12/28/2001 12:51p 2,569 dthdr.h
 12/28/2001 12:51p 4,361 dtlist.c
 12/28/2001 12:51p 2,548 dtmethod.c
 12/28/2001 12:51p 2,289 dtopen.c
 12/28/2001 12:51p 1,841 dtrenew.c
 12/28/2001 12:51p 2,076 dtrestore.c
 12/28/2001 12:51p 1,310 dtsize.c
 12/28/2001 12:51p 2,725 dtstat.c
 12/28/2001 12:51p 1,028 dtstrhash.c
 12/28/2001 12:51p 7,187 dttree.c
 20 12/28/2001 12:51p 3,279 dtview.c
 12/28/2001 12:51p 1,130 dtwalk.c
 12/28/2001 12:51p 609 libcdt.la
 12/28/2001 12:51p 12,646 Makefile
 12/28/2001 12:51p 678 Makefile.am
 25 12/28/2001 12:51p 13,183 Makefile.IN
 12/28/2001 12:51p 509 nmakefile
 12/28/2001 12:51p 939 README
 26 File(s) 106,571 bytes

30 Directory of F:\Send\ExtLibraries\graphviz-1.7.7\cdt\features

12/28/2001 12:51p 8,960 common
 1 File(s) 8,960 bytes

5 Directory of F:\Send\ExtLibraries\graphviz-1.7.7\contrib

12/28/2001 12:51p 2,148 gprof2dot.awk
 12/28/2001 12:51p 127 INDEX
 12/28/2001 12:51p 7,632 Makefile
 12/28/2001 12:51p 259 Makefile.am
 12/28/2001 12:51p 8,110 Makefile.in
 5 File(s) 18,276 bytes

Directory of F:\Send\ExtLibraries\graphviz-1.7.7\contrib\CVS

12/28/2001 12:51p 154 Entries
 12/28/2001 12:51p 18 Repository
 12/28/2001 12:51p 40 Root
 3 File(s) 212 bytes

Directory of F:\Send\ExtLibraries\graphviz-1.7.7\contrib\lefty-grace

12/28/2001 12:51p 23,701 dotty.lefty
 12/28/2001 12:51p 30,116 dotty_draw.lefty
 12/28/2001 12:51p 21,460 dotty_edit.lefty
 12/28/2001 12:51p 19,317 dotty_ui.lefty
 12/28/2001 12:51p 2,018 README
 5 File(s) 96,612 bytes

Directory of F:\Send\ExtLibraries\graphviz-1.7.7\contrib\lefty-grace\CVS

12/28/2001 12:51p 256 Entries
 12/28/2001 12:51p 30 Repository
 12/28/2001 12:51p 40 Root
 3 File(s) 326 bytes

Directory of F:\Send\ExtLibraries\graphviz-1.7.7\contrib\lefty-grace\lefty-grace

12/28/2001 12:51p 23,701 dotty.lefty
 12/28/2001 12:51p 30,116 dotty_draw.lefty
 12/28/2001 12:51p 21,460 dotty_edit.lefty
 12/28/2001 12:51p 19,317 dotty_ui.lefty
 12/28/2001 12:51p 2,018 README
 5 File(s) 96,612 bytes

Directory of F:\Send\ExtLibraries\graphviz-1.7.7\contrib\lefty-grace\lefty-grace\CVS

12/28/2001 12:51p 256 Entries
 12/28/2001 12:51p 30 Repository
 12/28/2001 12:51p 40 Root
 3 File(s) 326 bytes

Directory of F:\Send\ExtLibraries\graphviz-1.7.7\dag

12/28/2001 12:51p 6,931 base.c
 12/28/2001 12:51p 5,400 check.c
 12/28/2001 12:51p 6,444 config.c
 12/28/2001 12:51p 2,385 dag.c
 12/28/2001 12:51p 10,029 dag.h

12/28/2001 12:51p 16,358 ddspline.c
 12/28/2001 12:51p 4,020 geom.c
 12/28/2001 12:51p 10,962 Makefile
 12/28/2001 12:51p 472 Makefile.am
 5 12/28/2001 12:51p 11,496 Makefile.in
 12/28/2001 12:51p 2,606 medians.c
 12/28/2001 12:51p 4,137 opt.c
 12/28/2001 12:51p 13,880 order.c
 12/28/2001 12:51p 11,400 rank.c
 10 12/28/2001 12:51p 1,443 uvcross.c
 12/28/2001 12:51p 5,440 work.c
 12/28/2001 12:51p 5,834 xcoord.c
 12/28/2001 12:51p 3,181 ycoord.c
 18 File(s) 122,418 bytes

Directory of F:\Send\ExtLibraries\graphviz-1.7.7\doc

12/28/2001 12:51p 8,327 build.html
 12/28/2001 12:51p 5,366 Dot.ref
 20 12/28/2001 12:51p 9,584 FAQ.html
 12/28/2001 12:51p 137,760 gd.html
 12/28/2001 12:51p 7,600 Makefile
 12/28/2001 12:51p 262 Makefile.am
 12/28/2001 12:51p 8,078 Makefile.in
 25 12/28/2001 12:51p 6,754 tcldot.html
 8 File(s) 183,731 bytes

Directory of F:\Send\ExtLibraries\graphviz-1.7.7\dotneato

30 12/28/2001 12:51p 11,833 dot.1

12/28/2001 12:51p 1,258 dot.c
 12/28/2001 12:51p 2,118 dotmemtest.c
 12/28/2001 12:51p 18,960 Makefile
 12/28/2001 12:51p 1,590 Makefile.am
 5 12/28/2001 12:51p 19,506 Makefile.IN
 12/28/2001 12:51p 3,577 neato.1
 12/28/2001 12:51p 1,264 neato.c
 12/28/2001 12:51p 2,028 neatomemtest.c
 12/28/2001 12:51p 33 nmakefile
 10 12/28/2001 12:51p 17,843 XFIG_FORMAT3.2.txt
 11 File(s) 80,010 bytes

Directory of F:\Send\ExtLibraries\graphviz-1.7.7\dotneato\awk

12/28/2001 12:51p 1,010 colortbl.awk
 12/28/2001 12:51p 395 stringize.awk
 12/28/2001 12:51p 1,310 typegraph.awk
 3 File(s) 2,715 bytes

Directory of F:\Send\ExtLibraries\graphviz-1.7.7\dotneato\common

12/28/2001 12:51p 16,478 colortbl.h
 12/28/2001 12:51p 13,886 color_lib
 12/28/2001 12:51p 13,886 color_names
 25 12/28/2001 12:51p 3,267 colxlate.c
 12/28/2001 12:51p 5,262 const.h
 12/28/2001 12:51p 20,822 emit.c
 12/28/2001 12:51p 13,200 figgen.c
 12/28/2001 12:51p 20,819 gdgen.c
 30 12/28/2001 12:51p 589 globals.c

30

12/28/2001 12:51p 14,808 vtxgen.c
40 File(s) 392,806 bytes

Directory of F:\Send\ExtLibraries\graphviz-1.7.7\dotneato\dotgen

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12/28/2001 12:51p 1,388 acyclic.c

12/28/2001 12:51p 2,716 class1.c

12/28/2001 12:51p 6,729 class2.c

12/28/2001 12:51p 9,473 cluster.c

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12/28/2001 12:51p 13,932 compound.c

12/28/2001 12:51p 5,795 conc.c

12/28/2001 12:51p 2,316 decomp.c

12/28/2001 12:51p 631 dot.h

12/28/2001 12:51p 9,914 dotprocs.h

12/28/2001 12:51p 7,323 fastgr.c

12/28/2001 12:51p 5,243 flat.c

12/28/2001 12:51p 6,399 init.c

12/28/2001 12:51p 609 libdot.la

12/28/2001 12:51p 11,127 Makefile

12/28/2001 12:51p 545 Makefile.am

12/28/2001 12:51p 11,658 Makefile.IN

12/28/2001 12:51p 32,107 mincross.c

12/28/2001 12:51p 225 nmakefile

12/28/2001 12:51p 16,647 ns.c

25

12/28/2001 12:51p 20,272 position.c

12/28/2001 12:51p 10,930 rank.c

12/28/2001 12:51p 18,537 routespl.c

12/28/2001 12:51p 7,002 sameport.c

12/28/2001 12:51p 60,818 splines.c

30

12/28/2001 12:51p 1,189 timing.c

25 File(s) 263,525 bytes

Directory of F:\Send\ExtLibraries\graphviz-1.7.7\dotneato\neatogen

5	12/28/2001 12:51p	13,284 adjust.c
	12/28/2001 12:51p	592 adjust.h
	12/28/2001 12:51p	4,677 edges.c
	12/28/2001 12:51p	1,067 edges.h
	12/28/2001 12:51p	3,282 find_ints.c
10	12/28/2001 12:51p	2,573 geometry.c
	12/28/2001 12:51p	1,245 geometry.h
	12/28/2001 12:51p	3,050 heap.c
	12/28/2001 12:51p	766 heap.h
	12/28/2001 12:51p	6,609 hedges.c
5	12/28/2001 12:51p	1,347 hedges.h
	12/28/2001 12:51p	6,913 info.c
	12/28/2001 12:51p	1,394 info.h
	12/28/2001 12:51p	4,941 init.c
	12/28/2001 12:51p	3,999 intersect.c
20	12/28/2001 12:51p	2,931 legal.c
	12/28/2001 12:51p	615 libneato.la
	12/28/2001 12:51p	11,372 Makefile
	12/28/2001 12:51p	771 Makefile.am
	12/28/2001 12:51p	11,903 Makefile.IN
25	12/28/2001 12:51p	1,646 mem.h
	12/28/2001 12:51p	2,746 memory.c
	12/28/2001 12:51p	752 neato.h
	12/28/2001 12:51p	2,713 neatoproc.h
	12/28/2001 12:51p	244 nmakefile
30	12/28/2001 12:51p	9,622 poly.c

	12/28/2001 12:51p	890 poly.h
	12/28/2001 12:51p	1,158 printvis.c
	12/28/2001 12:51p	1,442 simple.h
	12/28/2001 12:51p	1,451 site.c
5	12/28/2001 12:51p	1,130 site.h
	12/28/2001 12:51p	2,392 solve.c
	12/28/2001 12:51p	20,643 splines.c
	12/28/2001 12:51p	13,655 stuff.c
	12/28/2001 12:51p	3,719 voronoi.c
10	12/28/2001 12:51p	619 voronoi.h
	36 File(s)	148,153 bytes

Directory of F:\Send\ExtLibraries\graphviz-1.7.7\dotty

	12/28/2001 12:51p	1,052 dotty.1
	12/28/2001 12:51p	2,150 dotty.bsh
	12/28/2001 12:51p	2,408 dotty.ksh
	12/28/2001 12:51p	24,415 dotty.lefty
	12/28/2001 12:51p	2,155 dotty.sh
	12/28/2001 12:51p	29,613 dotty_draw.lefty
	12/28/2001 12:51p	18,436 dotty_edit.lefty
	12/28/2001 12:51p	8,345 dotty_layout.lefty
	12/28/2001 12:51p	13,553 dotty_ui.lefty
	12/28/2001 12:51p	11,129 Makefile
25	12/28/2001 12:51p	478 Makefile.am
	12/28/2001 12:51p	11,608 Makefile.IN
	12/28/2001 12:51p	296 nmakefile
	12/28/2001 12:51p	46 notes
	14 File(s)	125,684 bytes

Directory of F:\Send\ExtLibraries\graphviz-1.7.7\dotty\mswin32

12/28/2001 12:51p 178 doinst
 12/28/2001 12:51p 2,403 dotty.c
 5 12/28/2001 12:51p 6,425 dotty.mak
 3 File(s) 9,006 bytes

Directory of F:\Send\ExtLibraries\graphviz-1.7.7\dotty\mswin32\CVS

10 12/28/2001 12:51p 139 Entries
 12/28/2001 12:51p 24 Repository
 12/28/2001 12:51p 40 Root
 3 File(s) 203 bytes

Directory of F:\Send\ExtLibraries\graphviz-1.7.7\fdp

12/28/2001 12:51p 5,603 adjust.c
 12/28/2001 12:51p 112 adjust.h
 12/28/2001 12:51p 824 component.c
 20 12/28/2001 12:51p 170 component.h
 12/28/2001 12:51p 1,860 exprval.c
 12/28/2001 12:51p 568 exprval.h
 12/28/2001 12:51p 3,748 grid.c
 12/28/2001 12:51p 625 grid.h
 25 12/28/2001 12:51p 12,445 il.c
 12/28/2001 12:51p 692 macros.h
 12/28/2001 12:51p 10,927 Makefile
 12/28/2001 12:51p 520 Makefile.am
 12/28/2001 12:51p 11,461 Makefile.in
 30 12/28/2001 12:51p 3,894 options.c

12/28/2001 12:51p 381 options.h
 12/28/2001 12:51p 1,229 structs.h
 16 File(s) 55,059 bytes

5 Directory of F:\Send\ExtLibraries\graphviz-1.7.7\gd

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12/28/2001 12:51p 4,211 bdfogd
 12/28/2001 12:51p 39,981 gd.c
 12/28/2001 12:51p 10,683 gd.h
 12/28/2001 12:51p 1,360 gd2copypal.c
 12/28/2001 12:51p 1,298 gd2time.c
 12/28/2001 12:51p 910 gd2topng.c
 12/28/2001 12:51p 5,116 gdcache.c
 12/28/2001 12:51p 2,756 gdcache.h
 12/28/2001 12:51p 3,051 gddemo.c
 12/28/2001 12:51p 81,853 gdfontg.c
 12/28/2001 12:51p 519 gdfontg.h
 12/28/2001 12:51p 78,780 gdfontl.c
 12/28/2001 12:51p 518 gdfontl.h
 12/28/2001 12:51p 58,280 gdfontmb.c
 12/28/2001 12:51p 479 gdfontmb.h
 12/28/2001 12:51p 51,606 gdfonts.c
 12/28/2001 12:51p 480 gdfonts.h
 12/28/2001 12:51p 29,618 gdfontt.c
 12/28/2001 12:51p 513 gdfontt.h
 12/28/2001 12:51p 21,671 gdft.c
 12/28/2001 12:51p 1,470 gdhelpers.c
 12/28/2001 12:51p 519 gdhelpers.h
 12/28/2001 12:51p 12,399 gdkanji.c
 12/28/2001 12:51p 1,170 gdparttopng.c

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	12/28/2001 12:51p	6,214 gdtables.c
	12/28/2001 12:51p	9,578 gdtest.c
	12/28/2001 12:51p	2,732 gdtestttf.c
	12/28/2001 12:51p	907 gdtopng.c
5	12/28/2001 12:51p	26,750 gdttf.c
	12/28/2001 12:51p	3,544 gdxpm.c
	12/28/2001 12:51p	4,112 gd_gd.c
	12/28/2001 12:51p	21,085 gd_gd2.c
	12/28/2001 12:51p	36,160 gd_gif.c
10	12/28/2001 12:51p	3,093 gd_io.c
	12/28/2001 12:51p	956 gd_io.h
	12/28/2001 12:51p	7,702 gd_io_dp.c
	12/28/2001 12:51p	2,557 gd_io_file.c
	12/28/2001 12:51p	2,898 gd_io_ss.c
	12/28/2001 12:51p	24,192 gd_jpeg.c
	12/28/2001 12:51p	22,928 gd_png.c
	12/28/2001 12:51p	897 gd_ss.c
	12/28/2001 12:51p	5,370 gd_wbmp.c
	12/28/2001 12:51p	893 giftogd.c
20	12/28/2001 12:51p	137,760 index.html
	12/28/2001 12:51p	38 install-item
	12/28/2001 12:51p	72,555 jisx0208.h
	12/28/2001 12:51p	606 libgd.la
	12/28/2001 12:51p	11,867 Makefile
25	12/28/2001 12:51p	1,261 Makefile.am
	12/28/2001 12:51p	12,417 Makefile.IN
	12/28/2001 12:51p	3,686 Makefile.nt
	12/28/2001 12:51p	5,850 Makefile.orig
	12/28/2001 12:51p	926 mathmake.c
30	12/28/2001 12:51p	754 nmakefile

12/28/2001 12:51p 907 pngtogd.c
 12/28/2001 12:51p 1,149 pngtogd2.c
 12/28/2001 12:51p 132,756 readme.txt
 12/28/2001 12:51p 6,928 wbmp.c
 12/28/2001 12:51p 1,271 wbmp.h
 12/28/2001 12:51p 5,149 webpng.c
 60 File(s) 987,689 bytes

Directory of F:\Send\ExtLibraries\graphviz-1.7.7\gd\test

12/28/2001 12:51p 28,877 gctest.gd2
 1 File(s) 28,877 bytes

Directory of F:\Send\ExtLibraries\graphviz-1.7.7\gdtclft

12/28/2001 12:51p 40,491 gdtclft.c
 12/28/2001 12:51p 12,039 gdtclft.n
 12/28/2001 12:51p 16,611 Makefile
 12/28/2001 12:51p 848 Makefile.am
 12/28/2001 12:51p 17,188 Makefile.IN
 12/28/2001 12:51p 127 nmakefile
 6 File(s) 87,304 bytes

Directory of F:\Send\ExtLibraries\graphviz-1.7.7\gdtclft\demo

12/28/2001 12:51p 1,684 entities
 12/28/2001 12:51p 44,391 entities.html
 12/28/2001 12:51p 291 entities.README
 12/28/2001 12:51p 9,291 Makefile
 12/28/2001 12:51p 234 Makefile.am

12/28/2001 12:51p 9,767 Makefile.in
 6 File(s) 65,658 bytes

Directory of F:\Send\ExtLibraries\graphviz-1.7.7\geo

5

12/28/2001 12:51p 3,680 geo.c
 12/28/2001 12:51p 10,618 Makefile
 12/28/2001 12:51p 307 Makefile.am
 12/28/2001 12:51p 11,152 Makefile.in
 4 File(s) 25,757 bytes

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Directory of F:\Send\ExtLibraries\graphviz-1.7.7\graph

12/28/2001 12:51p 6,770 attribs.c
 12/28/2001 12:51p 6,214 edge.c
 12/28/2001 12:51p 10,088 graph.3
 12/28/2001 12:51p 8,842 graph.c
 12/28/2001 12:51p 4,769 graph.h
 12/28/2001 12:51p 10,389 graphio.c
 12/28/2001 12:51p 6,382 lexer.c
 12/28/2001 12:51p 4,080 libgraph.h
 12/28/2001 12:51p 615 libgraph.la
 12/28/2001 12:51p 12,989 Makefile
 12/28/2001 12:51p 799 Makefile.am
 12/28/2001 12:51p 13,523 Makefile.IN
 12/28/2001 12:51p 303 nmakefile
 12/28/2001 12:51p 2,984 node.c
 12/28/2001 12:51p 38,655 parser.c
 12/28/2001 12:51p 11,243 parser.grammar
 12/28/2001 12:51p 315 parser.h

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12/28/2001 12:51p 6,770 attribs.c
 12/28/2001 12:51p 6,214 edge.c
 12/28/2001 12:51p 10,088 graph.3
 12/28/2001 12:51p 8,842 graph.c
 12/28/2001 12:51p 4,769 graph.h
 12/28/2001 12:51p 10,389 graphio.c
 12/28/2001 12:51p 6,382 lexer.c
 12/28/2001 12:51p 4,080 libgraph.h
 12/28/2001 12:51p 615 libgraph.la
 12/28/2001 12:51p 12,989 Makefile
 12/28/2001 12:51p 799 Makefile.am
 12/28/2001 12:51p 13,523 Makefile.IN
 12/28/2001 12:51p 303 nmakefile
 12/28/2001 12:51p 2,984 node.c
 12/28/2001 12:51p 38,655 parser.c
 12/28/2001 12:51p 11,243 parser.grammar
 12/28/2001 12:51p 315 parser.h

12/28/2001 12:51p 8,877 parser.y
 12/28/2001 12:51p 1,915 refstr.c
 12/28/2001 12:51p 2,570 trie.c
 12/28/2001 12:51p 2,836 triefa.cP
 5 12/28/2001 12:51p 1,210 triefa.h
 22 File(s) 156,368 bytes

Directory of F:\Send\ExtLibraries\graphviz-1.7.7\graphs

10 12/28/2001 12:51p 11,517 Makefile
 12/28/2001 12:51p 118 Makefile.am
 12/28/2001 12:51p 12,005 Makefile.in
 3 File(s) 23,640 bytes

Directory of F:\Send\ExtLibraries\graphviz-1.7.7\graphs\directed

12/28/2001 12:51p 851 abstract.dot
 12/28/2001 12:51p 990 alf.dot
 12/28/2001 12:51p 7,493 awilliams.dot
 20 12/28/2001 12:51p 278 clust.dot
 12/28/2001 12:51p 154 clust1.dot
 12/28/2001 12:51p 154 clust2.dot
 12/28/2001 12:51p 154 clust3.dot
 12/28/2001 12:51p 428 clust4.dot
 25 12/28/2001 12:51p 263 clust5.dot
 12/28/2001 12:51p 5,676 crazy.dot
 12/28/2001 12:51p 444 ctext.dot
 12/28/2001 12:51p 993 dfa.dot
 12/28/2001 12:51p 909 fig6.dot
 30 12/28/2001 12:51p 625 fsm.dot

12/28/2001 12:51p 1,831 viewfile.dot

12/28/2001 12:51p 1,047 world.dot

46 File(s) 93,027 bytes

5 Directory of F:\Send\ExtLibraries\graphviz-1.7.7\graphs\undirected

12/28/2001 12:51p 672 ER.dot

12/28/2001 12:51p 8,766 Makefile

12/28/2001 12:51p 476 Makefile.am

10 12/28/2001 12:51p 9,242 Makefile.in

12/28/2001 12:51p 1,857 ngk10_4.dot

12/28/2001 12:51p 249 process.dot

6 File(s) 21,262 bytes

5 Directory of F:\Send\ExtLibraries\graphviz-1.7.7\grid

12/28/2001 12:51p 4,331 cutbox.c

12/28/2001 12:51p 10,569 erbase.c

12/28/2001 12:51p 7,891 grid.c

20 12/28/2001 12:51p 5,310 grid.h

12/28/2001 12:51p 10,767 Makefile

12/28/2001 12:51p 342 Makefile.am

12/28/2001 12:51p 11,301 Makefile.in

12/28/2001 12:51p 1,103 print.c

25 12/28/2001 12:51p 12,368 route.c

9 File(s) 63,982 bytes

Directory of F:\Send\ExtLibraries\graphviz-1.7.7\incr

30 12/28/2001 12:51p 1,360 basic.c

12/28/2001 12:51p 4,627 batch.c
 12/28/2001 12:51p 2,735 callback.c
 12/28/2001 12:51p 458 dispatch.c
 12/28/2001 12:51p 5,060 edgeclip.c
 5 12/28/2001 12:51p 2,258 engine.c
 12/28/2001 12:51p 3,706 engine.h
 12/28/2001 12:51p 7,034 incr.h
 12/28/2001 12:51p 10,867 Makefile
 12/28/2001 12:51p 403 Makefile.am
 10 12/28/2001 12:51p 11,401 Makefile.in
 12/28/2001 12:51p 6,135 model.c
 12/28/2001 12:51p 4,749 routem.c
 13 File(s) 60,793 bytes

Directory of F:\Send\ExtLibraries\graphviz-1.7.7\left

12/28/2001 12:51p 2,459 code.c
 12/28/2001 12:51p 1,833 code.h
 12/28/2001 12:51p 17,155 colors.txt
 20 12/28/2001 12:51p 11,857 common.c
 12/28/2001 12:51p 1,943 common.h
 12/28/2001 12:51p 4,605 display.c
 12/28/2001 12:51p 689 display.h
 12/28/2001 12:51p 28,973 exec.c
 25 12/28/2001 12:51p 872 exec.h
 12/28/2001 12:51p 25,207 g.c
 12/28/2001 12:51p 11,686 g.h
 12/28/2001 12:51p 50,387 gfxview.c
 12/28/2001 12:51p 1,738 gfxview.h
 30 12/28/2001 12:51p 21,692 internal.c

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Directory of F:\Send\ExtLibraries\graphviz-1.7.7\left\aix_mods\CVS

12/28/2001 12:51p 136 Entries
 12/28/2001 12:51p 25 Repository
 5 12/28/2001 12:51p 40 Root
 3 File(s) 201 bytes

Directory of F:\Send\ExtLibraries\graphviz-1.7.7\left\cs2l

10 12/28/2001 12:51p 1,113 cs2l.c
 12/28/2001 12:51p 124 cs2l.h
 12/28/2001 12:51p 8,543 Makefile
 12/28/2001 12:51p 246 Makefile.am
 12/28/2001 12:51p 9,018 Makefile.in
 5 File(s) 19,044 bytes

Directory of F:\Send\ExtLibraries\graphviz-1.7.7\left\dot2l

20 12/28/2001 12:51p 23,362 dot2l.c
 12/28/2001 12:51p 1,100 dot2l.h
 12/28/2001 12:51p 6,891 dotlex.c
 12/28/2001 12:51p 33,001 dotparse.c
 12/28/2001 12:51p 268 dotparse.h
 12/28/2001 12:51p 3,505 dotparse.y
 25 12/28/2001 12:51p 2,429 dottrie.c
 12/28/2001 12:51p 11,337 Makefile
 12/28/2001 12:51p 533 Makefile.am
 12/28/2001 12:51p 11,868 Makefile.in
 12/28/2001 12:51p 2,243 triefa.cP
 30 12/28/2001 12:51p 798 triefa.h

12 File(s) 97,335 bytes

Directory of F:\Send\ExtLibraries\graphviz-1.7.7\left\examples

5 12/28/2001 12:51p 3,770 box.lefty
 12/28/2001 12:51p 474 def.lefty
 12/28/2001 12:51p 2,833 fractal.lefty
 12/28/2001 12:51p 5,985 fractal2.lefty
 12/28/2001 12:51p 8,616 Makefile
 10 12/28/2001 12:51p 286 Makefile.am
 12/28/2001 12:51p 9,092 Makefile.in
 12/28/2001 12:51p 3,307 slides.lefty
 12/28/2001 12:51p 5,079 tree.lefty

9 File(s) 39,442 bytes

Directory of F:\Send\ExtLibraries\graphviz-1.7.7\left\os

12/28/2001 12:51p 11,489 Makefile
 12/28/2001 12:51p 77 Makefile.am
 12/28/2001 12:51p 11,974 Makefile.in

3 File(s) 23,540 bytes

Directory of F:\Send\ExtLibraries\graphviz-1.7.7\left\os\unix

25 12/28/2001 12:51p 10,245 io.c
 12/28/2001 12:51p 10,547 Makefile
 12/28/2001 12:51p 176 Makefile.am
 12/28/2001 12:51p 11,075 Makefile.in

4 File(s) 32,043 bytes

Directory of F:\Send\ExtLibraries\graphviz-1.7.7\lefty\ws

12/28/2001 12:51p 11,552 Makefile
 12/28/2001 12:51p 102 Makefile.am
 5 12/28/2001 12:51p 12,037 Makefile.in
 3 File(s) 23,691 bytes

Directory of F:\Send\ExtLibraries\graphviz-1.7.7\lefty\ws\mswin32

10 12/28/2001 12:51p 9,586 garray.c
 12/28/2001 12:51p 4,306 gbutton.c
 12/28/2001 12:51p 43,610 gcanvas.c
 12/28/2001 12:51p 22,815 gcommon.c
 12/28/2001 12:51p 5,719 gcommon.h
 12/28/2001 12:51p 4,526 glabel.c
 12/28/2001 12:51p 2,535 gmenu.c
 12/28/2001 12:51p 38,128 gpcanvas.c
 12/28/2001 12:51p 6,684 gquery.c
 12/28/2001 12:51p 6,186 gscroll.c
 12/28/2001 12:51p 6,537 gtext.c
 12/28/2001 12:51p 4,777 gview.c
 12/28/2001 12:51p 2,424 lefty.rc
 12/28/2001 12:51p 636 resource.h
 14 File(s) 158,469 bytes

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Directory of F:\Send\ExtLibraries\graphviz-1.7.7\lefty\ws\mswin32\CVS

12/28/2001 12:51p 653 Entries
 12/28/2001 12:51p 27 Repository
 30 12/28/2001 12:51p 40 Root

3 File(s) 720 bytes

Directory of F:\Send\ExtLibraries\graphviz-1.7.7\left\ws\x11

5	12/28/2001 12:51p	16,447 garray.c
	12/28/2001 12:51p	5,480 gbutton.c
	12/28/2001 12:51p	52,762 gcanvas.c
	12/28/2001 12:51p	5,981 gcommon.c
	12/28/2001 12:51p	6,780 gcommon.h
10	12/28/2001 12:51p	6,112 glabel.c
	12/28/2001 12:51p	3,408 gmenu.c
	12/28/2001 12:51p	23,301 gpcanvas.c
	12/28/2001 12:51p	9,563 gquery.c
	12/28/2001 12:51p	7,609 gscroll.c
	12/28/2001 12:51p	8,516 gtext.c
	12/28/2001 12:51p	6,292 gview.c
	12/28/2001 12:51p	14,024 Makefile
	12/28/2001 12:51p	365 Makefile.am
	12/28/2001 12:51p	14,586 Makefile.in
20	15 File(s)	181,226 bytes

Directory of F:\Send\ExtLibraries\graphviz-1.7.7\left\ws\x11\libfilereq

	12/28/2001 12:51p	4,440 Dir.c
25	12/28/2001 12:51p	17,904 Draw.c
	12/28/2001 12:51p	10,824 Makefile
	12/28/2001 12:51p	306 Makefile.am
	12/28/2001 12:51p	11,359 Makefile.in
	12/28/2001 12:51p	17,999 Path.c
30	12/28/2001 12:51p	2,829 README.selfile

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Directory of F:\Send\ExtLibraries\graphviz-1.7.7\makearch

12/28/2001 12:51p 462 aix41
 12/28/2001 12:51p 644 hp.pa
 5 12/28/2001 12:51p 444 linux.i386
 12/28/2001 12:51p 394 netbsd.i386
 12/28/2001 12:51p 391 osf.alpha
 12/28/2001 12:51p 411 sgi.mips2
 12/28/2001 12:51p 442 sgi.mips3
 10 12/28/2001 12:51p 573 sol.i386
 12/28/2001 12:51p 558 sol.sun4
 12/28/2001 12:51p 560 sol6.sun4
 12/28/2001 12:51p 353 sun4
 11 File(s) 5,232 bytes

Directory of F:\Send\ExtLibraries\graphviz-1.7.7\makearch\CVS

12/28/2001 12:51p 464 Entries
 12/28/2001 12:51p 19 Repository
 20 12/28/2001 12:51p 40 Root
 3 File(s) 523 bytes

Directory of F:\Send\ExtLibraries\graphviz-1.7.7\ns

25 12/28/2001 12:51p 10,644 Makefile
 12/28/2001 12:51p 282 Makefile.am
 12/28/2001 12:51p 11,178 Makefile.in
 12/28/2001 12:51p 20,299 ns.c
 12/28/2001 12:51p 399 ns.h
 30 12/28/2001 12:51p 604 nspvt.h

6 File(s) 43,406 bytes

Directory of F:\Send\ExtLibraries\graphviz-1.7.7\pathplan

5	12/28/2001 12:51p	7,178 cvt.c
	12/28/2001 12:51p	2,472 inpoly.c
	12/28/2001 12:51p	624 libpathplan.la
	12/28/2001 12:51p	12,411 Makefile
	12/28/2001 12:51p	488 Makefile.am
10	12/28/2001 12:51p	12,945 Makefile.IN
	12/28/2001 12:51p	405 nmakefile
	12/28/2001 12:51p	6,798 path.lefty
	12/28/2001 12:51p	949 pathgeom.h
	12/28/2001 12:51p	2,845 pathplan.3
15	12/28/2001 12:51p	1,253 pathplan.h
	12/28/2001 12:51p	970 pathutil.h
	12/28/2001 12:51p	1,237 README
	12/28/2001 12:51p	18,574 route.c
	12/28/2001 12:51p	17,447 shortest.c
20	12/28/2001 12:51p	3,120 shortestpth.c
	12/28/2001 12:51p	2,782 solvers.c
	12/28/2001 12:51p	693 solvers.h
	12/28/2001 12:51p	598 tri.h
	12/28/2001 12:51p	4,837 triang.c
25	12/28/2001 12:51p	1,375 util.c
	12/28/2001 12:51p	1,414 vis.h
	12/28/2001 12:51p	11,846 visibility.c
	12/28/2001 12:51p	1,329 vispath.h

24 File(s) 114,590 bytes

Directory of F:\Send\ExtLibraries\graphviz-1.7.7\shape

12/28/2001 12:51p 3,558 inpoly.c
 12/28/2001 12:51p 10,702 Makefile
 5 12/28/2001 12:51p 288 Makefile.am
 12/28/2001 12:51p 11,236 Makefile.in
 12/28/2001 12:51p 2,158 shape.c
 12/28/2001 12:51p 1,448 shape.h
 6 File(s) 29,390 bytes

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Directory of F:\Send\ExtLibraries\graphviz-1.7.7\tcldgl

12/28/2001 12:51p 5,958 dgl.c
 12/28/2001 12:51p 3,531 dgl.h
 12/28/2001 12:51p 11,692 dglayout.c
 12/28/2001 12:51p 16,976 dglshape.c
 12/28/2001 12:51p 10,908 dglutil.c
 12/28/2001 12:51p 17,134 Makefile
 12/28/2001 12:51p 1,141 Makefile.am
 12/28/2001 12:51p 17,709 Makefile.in
 12/28/2001 12:51p 13,501 tcldgl.n
 9 File(s) 98,550 bytes

Directory of F:\Send\ExtLibraries\graphviz-1.7.7\tcldgl\demo

12/28/2001 12:51p 24,728 dge
 12/28/2001 12:51p 1,486 dge.example1.dot
 12/28/2001 12:51p 6,682 dge.example2.dot
 12/28/2001 12:51p 489 dge.README
 30 12/28/2001 12:51p 9,300 Makefile

12/28/2001 12:51p 245 Makefile.am
 12/28/2001 12:51p 9,776 Makefile.in
 7 File(s) 52,706 bytes

5 Directory of F:\Send\ExtLibraries\graphviz-1.7.7\tcldgr

12/28/2001 12:51p 6,059 dgedge.c
 12/28/2001 12:51p 11,642 dgnode.c
 12/28/2001 12:51p 7,695 dgr.c
 10 12/28/2001 12:51p 2,735 dgr.h
 12/28/2001 12:51p 24,450 dgraph.c
 12/28/2001 12:51p 18,377 dgrutil.c
 12/28/2001 12:51p 16,727 Makefile
 12/28/2001 12:51p 876 Makefile.am
 5 12/28/2001 12:51p 17,302 Makefile.in
 12/28/2001 12:51p 27,019 tcldgr.n
 10 File(s) 132,882 bytes

20 Directory of F:\Send\ExtLibraries\graphviz-1.7.7\tcldgr\demo

12/28/2001 12:51p 6,465 ihi
 12/28/2001 12:51p 991 ihi.README
 12/28/2001 12:51p 43 ihi.testdata
 12/28/2001 12:51p 9,278 Makefile
 25 12/28/2001 12:51p 225 Makefile.am
 12/28/2001 12:51p 9,754 Makefile.in
 6 File(s) 26,756 bytes

Directory of F:\Send\ExtLibraries\graphviz-1.7.7\tcldot

12/28/2001 12:51p 17,226 Makefile
 12/28/2001 12:51p 1,292 Makefile.am
 5 12/28/2001 12:51p 17,813 Makefile.IN
 12/28/2001 12:51p 523 nmakefile
 12/28/2001 12:51p 2,295 README
 12/28/2001 12:51p 418 README.Tkspline
 12/28/2001 12:51p 43,963 tcldot.c
 10 12/28/2001 12:51p 137 tcldot.h
 12/28/2001 12:51p 15,368 tcldot.n
 12/28/2001 12:51p 13,901 tkgen.c
 10 File(s) 112,936 bytes

Directory of F:\Send\ExtLibraries\graphviz-1.7.7\tcldot\demo

12/28/2001 12:51p 21,006 doted
 12/28/2001 12:51p 394 doted.README
 12/28/2001 12:51p 9,269 Makefile
 20 12/28/2001 12:51p 214 Makefile.am
 12/28/2001 12:51p 9,745 Makefile.in
 5 File(s) 40,628 bytes

Directory of F:\Send\ExtLibraries\graphviz-1.7.7\tclhandle

12/28/2001 12:51p 10,721 Makefile
 12/28/2001 12:51p 255 Makefile.am
 12/28/2001 12:51p 11,255 Makefile.IN
 12/28/2001 12:51p 62 nmakefile
 25 12/28/2001 12:51p 13,385 tclhandle.c
 30

12/28/2001 12:51p 3,230 tclhandle.h

6 File(s) 38,908 bytes

Directory of F:\Send\ExtLibraries\graphviz-1.7.7\tclpathplan

5

12/28/2001 12:51p 2,626 find_ints.c

12/28/2001 12:51p 3,470 intersect.c

12/28/2001 12:51p 875 makecw.c

12/28/2001 12:51p 15,263 Makefile

10

12/28/2001 12:51p 745 Makefile.am

12/28/2001 12:51p 15,838 Makefile.in

12/28/2001 12:51p 1,001 simple.h

12/28/2001 12:51p 24,300 tclpathplan.c

12/28/2001 12:51p 3,531 wrapper.c

9 File(s) 67,649 bytes

Directory of F:\Send\ExtLibraries\graphviz-1.7.7\tclpathplan\demo

12/28/2001 12:51p 13,370 Makefile

12/28/2001 12:51p 250 Makefile.am

12/28/2001 12:51p 13,856 Makefile.in

12/28/2001 12:51p 17,625 pathplan

12/28/2001 12:51p 420 pathplan.README

5 File(s) 45,521 bytes

Directory of F:\Send\ExtLibraries\graphviz-1.7.7\tclpathplan\demo\pathplan_data

12/28/2001 12:51p 291 boxes.dat

12/28/2001 12:51p 640 dpd.dat

30

12/28/2001 12:51p 185 funny.dat

12/28/2001 12:51p 8,704 Makefile
 12/28/2001 12:51p 345 Makefile.am
 12/28/2001 12:51p 9,177 Makefile.in
 12/28/2001 12:51p 1,391 maze.dat
 5 12/28/2001 12:51p 238 nested.dat
 12/28/2001 12:51p 238 northo.dat
 12/28/2001 12:51p 510 obs.dat
 12/28/2001 12:51p 36 other.dat
 12/28/2001 12:51p 23 paths.dat
 10 12/28/2001 12:51p 696 rotor.dat
 12/28/2001 12:51p 640 u.dat
 12/28/2001 12:51p 30 unknown.dat
 15 File(s) 23,144 bytes

Directory of F:\Send\ExtLibraries\graphviz-1.7.7\tclstubs

12/28/2001 12:51p 10,777 Makefile
 12/28/2001 12:51p 397 Makefile.am
 12/28/2001 12:51p 11,349 Makefile.IN
 20 12/28/2001 12:51p 62 nmakefile
 12/28/2001 12:51p 296 README
 12/28/2001 12:51p 60 tclStubLib.c
 6 File(s) 22,941 bytes

25 Directory of F:\Send\ExtLibraries\graphviz-1.7.7\tkspline

12/28/2001 12:51p 16,466 Makefile
 12/28/2001 12:51p 732 Makefile.am
 12/28/2001 12:51p 17,074 Makefile.in
 30 12/28/2001 12:51p 508 README

12/28/2001 12:51p 7,596 tkspline.c
 12/28/2001 12:51p 7,369 tkspline.n
 6 File(s) 49,745 bytes

5 Directory of F:\Send\ExtLibraries\graphviz-1.7.7\tkspline\demo

12/28/2001 12:51p 9,275 Makefile
 12/28/2001 12:51p 216 Makefile.am
 12/28/2001 12:51p 9,751 Makefile.in
 10 12/28/2001 12:51p 4,549 spline
 12/28/2001 12:51p 267 spline.README
 5 File(s) 24,058 bytes

Directory of F:\Send\ExtLibraries\graphviz-1.7.7\tkstubs

12/28/2001 12:51p 10,845 Makefile
 12/28/2001 12:51p 403 Makefile.am
 12/28/2001 12:51p 11,415 Makefile.in
 12/28/2001 12:51p 295 README
 12/28/2001 12:51p 60 tkStubImg.c
 12/28/2001 12:51p 60 tkStubLib.c
 6 File(s) 23,078 bytes

Directory of F:\Send\ExtLibraries\graphviz-1.7.7\tools

25 12/28/2001 12:51p 72,985 iffe
 12/28/2001 12:51p 11,532 Makefile
 12/28/2001 12:51p 135 Makefile.am
 12/28/2001 12:51p 12,020 Makefile.IN
 30 4 File(s) 96,672 bytes

Directory of F:\Send\ExtLibraries\graphviz-1.7.7\tools\ast

	12/28/2001 12:51p	3,033 align.h
5	12/28/2001 12:51p	1,998 ast.h
	12/28/2001 12:51p	1,714 chresc.c
	12/28/2001 12:51p	539 chrtoi.c
	12/28/2001 12:51p	1,621 error.c
	12/28/2001 12:51p	1,037 error.h
10	12/28/2001 12:51p	432 fmtbuf.c
	12/28/2001 12:51p	2,393 fmtesc.c
	12/28/2001 12:51p	1,207 hashkey.h
	12/28/2001 12:51p	11,418 Makefile
	12/28/2001 12:51p	550 Makefile.am
5	12/28/2001 12:51p	11,949 Makefile.IN
	12/28/2001 12:51p	1,265 pathaccess.c
	12/28/2001 12:51p	332 pathbin.c
	12/28/2001 12:51p	3,780 pathcanon.c
	12/28/2001 12:51p	515 pathcat.c
20	12/28/2001 12:51p	2,278 pathfind.c
	12/28/2001 12:51p	1,375 pathgetlink.c
	12/28/2001 12:51p	2,078 pathpath.c
	12/28/2001 12:51p	1,181 sfstr.h
	12/28/2001 12:51p	235 strcopy.c
25	12/28/2001 12:51p	365 strerror.c
	12/28/2001 12:51p	501 stresc.c
	12/28/2001 12:51p	17,148 strmatch.c
	12/28/2001 12:51p	3,979 strton.c
	25 File(s)	72,923 bytes

Directory of F:\Send\ExtLibraries\graphviz-1.7.7\tools\expr

5 12/28/2001 12:51p 14,062 excc.c
 12/28/2001 12:51p 1,078 excontext.c
 12/28/2001 12:51p 1,360 exdata.c
 12/28/2001 12:51p 741 exerror.c
 12/28/2001 12:51p 32,024 exeval.c
 12/28/2001 12:51p 600 exexpr.c
 12/28/2001 12:51p 15,749 exgram.h
 10 12/28/2001 12:51p 810 exlexname.c
 12/28/2001 12:51p 4,590 exlib.h
 12/28/2001 12:51p 1,408 exopen.c
 12/28/2001 12:51p 73,496 exparse.c
 12/28/2001 12:51p 23,169 exparse.y
 12/28/2001 12:51p 1,819 expr.3
 12/28/2001 12:51p 8,037 expr.h
 12/28/2001 12:51p 856 exrewind.c
 12/28/2001 12:51p 13,929 extoken.c
 12/28/2001 12:51p 439 extype.c
 20 12/28/2001 12:51p 436 exzero.c
 12/28/2001 12:51p 13,685 Makefile
 12/28/2001 12:51p 1,426 Makefile.am
 12/28/2001 12:51p 14,185 Makefile.IN
 12/28/2001 12:51p 1,563 Makefile.nmake
 25 12/28/2001 12:51p 1,548 Makefile.orig
 12/28/2001 12:51p 1,630 RELEASE
 24 File(s) 228,640 bytes

Directory of F:\Send\ExtLibraries\graphviz-1.7.7\tools\gpr

	12/28/2001 12:51p	1,950 actions.c
	12/28/2001 12:51p	169 actions.h
	12/28/2001 12:51p	20,098 compile.c
	12/28/2001 12:51p	879 compile.h
5	12/28/2001 12:51p	11,355 gpr.l
	12/28/2001 12:51p	8,287 gpr.c
	12/28/2001 12:51p	1,651 gprdata
	12/28/2001 12:51p	640 gprstate.c
	12/28/2001 12:51p	547 gprstate.h
10	12/28/2001 12:51p	16,761 Makefile
	12/28/2001 12:51p	1,003 Makefile.am
	12/28/2001 12:51p	17,320 Makefile.IN
	12/28/2001 12:51p	4,044 mkdefs.c
	12/28/2001 12:51p	9,754 parse.c
	12/28/2001 12:51p	679 parse.h
	12/28/2001 12:51p	951 queue.c
	12/28/2001 12:51p	488 queue.h
	17 File(s)	96,576 bytes

Directory of F:\Send\ExtLibraries\graphviz-1.7.7\tools\sfio

	12/28/2001 12:51p	15,977 Makefile
	12/28/2001 12:51p	1,425 Makefile.am
	12/28/2001 12:52p	16,522 Makefile.IN
25	12/28/2001 12:52p	6,219 Makefile.orig
	12/28/2001 12:52p	2,567 README
	12/28/2001 12:52p	2,939 sfclose.c
	12/28/2001 12:52p	834 sfclock.c
	12/28/2001 12:52p	4,588 sfcvt.c
30	12/28/2001 12:52p	3,482 sfdisc.c

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12/28/2001 12:52p	617 sfdlen.c
12/28/2001 12:52p	2,574 sfexcept.c
12/28/2001 12:52p	2,644 sfexit.c
12/28/2001 12:52p	2,108 sfextern.c
12/28/2001 12:52p	363 sffcv.t.c
12/28/2001 12:52p	2,404 sffilbuf.c
12/28/2001 12:52p	2,016 sfflsbuf.c
12/28/2001 12:52p	904 sfgetd.c
12/28/2001 12:52p	884 sfgetl.c
12/28/2001 12:52p	801 sfgetm.c
12/28/2001 12:52p	2,755 sfgetr.c
12/28/2001 12:52p	755 sfgetu.c
12/28/2001 12:52p	29,501 sfhdr.h
12/28/2001 12:52p	16,306 sfio.h
12/28/2001 12:52p	3,694 sfio_t.h
12/28/2001 12:52p	300 sflen.c
12/28/2001 12:52p	11,827 sfmode.c
12/28/2001 12:52p	6,095 sfmove.c
12/28/2001 12:52p	838 sfmutex.c
12/28/2001 12:52p	2,673 sfnew.c
12/28/2001 12:52p	288 sfnotify.c
12/28/2001 12:52p	1,094 sfnpuc.c
12/28/2001 12:52p	4,341 sfopen.c
12/28/2001 12:52p	5,246 sfpkrd.c
12/28/2001 12:52p	4,603 sfpoll.c
12/28/2001 12:52p	7,203 sfpool.c
12/28/2001 12:52p	6,027 sfpopen.c
12/28/2001 12:52p	1,445 sfprintf.c
12/28/2001 12:52p	877 sfprints.c
12/28/2001 12:52p	1,605 sfpurge.c

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12/28/2001	12:52p	1,473 sfputd.c
12/28/2001	12:52p	1,255 sfputl.c
12/28/2001	12:52p	1,230 sfputm.c
12/28/2001	12:52p	1,900 sfputr.c
12/28/2001	12:52p	1,130 sfputu.c
12/28/2001	12:52p	1,078 sfraise.c
12/28/2001	12:52p	6,582 sfrd.c
12/28/2001	12:52p	2,700 sfread.c
12/28/2001	12:52p	3,291 sfreserve.c
12/28/2001	12:52p	1,137 sfresize.c
12/28/2001	12:52p	1,358 sfscanf.c
12/28/2001	12:52p	6,219 sfseek.c
12/28/2001	12:52p	1,470 sfset.c
12/28/2001	12:52p	7,921 sfsetbuf.c
12/28/2001	12:52p	2,291 sfsetfd.c
12/28/2001	12:52p	1,810 sfsize.c
12/28/2001	12:52p	1,734 sfsk.c
12/28/2001	12:52p	2,018 sfstack.c
12/28/2001	12:52p	2,606 sfstrtod.c
12/28/2001	12:52p	2,318 sfswap.c
12/28/2001	12:52p	3,409 sfsync.c
12/28/2001	12:52p	11,729 sftable.c
12/28/2001	12:52p	838 sftell.c
12/28/2001	12:52p	8,814 sftmp.c
12/28/2001	12:52p	1,775 sfungetc.c
12/28/2001	12:52p	24,994 sfvprintf.c
12/28/2001	12:52p	18,547 sfvscanf.c
12/28/2001	12:52p	4,861 sfwr.c
12/28/2001	12:52p	3,026 sfwrite.c
12/28/2001	12:52p	4,637 vthread.h

69 File(s) 311,492 bytes

Directory of F:\Send\ExtLibraries\graphviz-1.7.7\tools\sfio\features

5 12/28/2001 12:51p 8,960 common
 12/28/2001 12:51p 12,049 sfio
 12/28/2001 12:51p 9,115 stdio
 3 File(s) 30,124 bytes

10 Directory of F:\Send\ExtLibraries\graphviz-1.7.7\tools\sfio\features\CVS

12/28/2001 12:51p 120 Entries
 12/28/2001 12:51p 30 Repository
 12/28/2001 12:51p 40 Root
 3 File(s) 190 bytes

Directory of F:\Send\ExtLibraries\graphviz-1.7.7\tools\sfio\Sfio_dc

12/28/2001 12:52p 11,797 Makefile
 12/28/2001 12:52p 948 Makefile.am
 12/28/2001 12:52p 12,334 Makefile.IN
 12/28/2001 12:52p 4,137 sfdcdio.c
 12/28/2001 12:52p 7,811 sfdcdos.c
 12/28/2001 12:52p 4,018 sfdcfilter.c
 25 12/28/2001 12:52p 41 sfdchdr.h
 12/28/2001 12:52p 10,249 sfdclzw.c
 12/28/2001 12:52p 3,439 sfdcseekable.c
 12/28/2001 12:52p 997 sfdcslow.c
 12/28/2001 12:52p 3,935 sfdcsubstream.c
 30 12/28/2001 12:52p 1,905 sfdctee.c

12/28/2001 12:52p 3,703 sfdcunion.c

12/28/2001 12:52p 575 sfdisc.h

14 File(s) 65,889 bytes

5 Directory of F:\Send\ExtLibraries\graphviz-1.7.7\tools\sfio\Sfio_f

12/28/2001 12:52p 11,894 Makefile

12/28/2001 12:52p 992 Makefile.am

12/28/2001 12:52p 12,431 Makefile.IN

10 12/28/2001 12:52p 162 _sfclrerr.c

12/28/2001 12:52p 160 _sfdlen.c

12/28/2001 12:52p 150 _sfeof.c

12/28/2001 12:52p 158 _sferror.c

12/28/2001 12:52p 162 _sf_FILENO.c

12/28/2001 12:52p 154 _sfgetc.c

12/28/2001 12:52p 156 _sfllen.c

12/28/2001 12:52p 182 _sfputc.c

12/28/2001 12:52p 191 _sfputd.c

12/28/2001 12:52p 187 _sfputl.c

20 12/28/2001 12:52p 224 _sfputm.c

12/28/2001 12:52p 189 _sfputu.c

12/28/2001 12:52p 135 _sfslenc.c

12/28/2001 12:52p 166 _sfstacked.c

12/28/2001 12:52p 158 _sfulen.c

25 12/28/2001 12:52p 166 _sfvalue.c

19 File(s) 28,017 bytes

Directory of F:\Send\ExtLibraries\graphviz-1.7.7\tools\src

30 12/28/2001 12:52p 1,653 acyclic.1

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12/28/2001 12:52p 4,462 acyclic.c
 12/28/2001 12:52p 1,177 ccomps.1
 12/28/2001 12:52p 3,488 ccomps.c
 12/28/2001 12:52p 1,947 colorize.1
 12/28/2001 12:52p 5,295 colorize.c
 12/28/2001 12:52p 16,451 colortbl.h
 12/28/2001 12:52p 1,579 colxlate.c
 12/28/2001 12:52p 1,545 gc.1
 12/28/2001 12:52p 5,815 gc.c

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12/28/2001 12:52p 2,879 ingraphs.c
 12/28/2001 12:52p 657 ingraphs.h
 12/28/2001 12:52p 21,411 Makefile
 12/28/2001 12:52p 2,353 Makefile.am
 12/28/2001 12:52p 21,972 Makefile.IN
 12/28/2001 12:52p 361 nop.1
 12/28/2001 12:52p 1,518 nop.c
 12/28/2001 12:52p 1,616 sccmap.1
 12/28/2001 12:52p 8,094 sccmap.c
 12/28/2001 12:52p 1,195 tred.1
 12/28/2001 12:52p 2,719 tred.c
 12/28/2001 12:52p 1,490 unflatten.1
 12/28/2001 12:52p 4,670 unflatten.c

23 File(s) 114,347 bytes

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Directory of F:\Send\ExtLibraries\graphviz-1.7.7\tools\vmalloc

12/28/2001 12:52p 3,477 ast_common.h
 12/28/2001 12:52p 11,917 Makefile
 12/28/2001 12:52p 928 Makefile.am
 12/28/2001 12:52p 12,454 Makefile.IN

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12/28/2001 12:52p 9,135 malloc.c
 12/28/2001 12:52p 808 README
 12/28/2001 12:52p 8,159 vmalloc.h
 12/28/2001 12:52p 29,378 vmbest.c
 5 12/28/2001 12:52p 1,170 vmclear.c
 12/28/2001 12:52p 1,496 vmclose.c
 12/28/2001 12:52p 868 vmdcheap.c
 12/28/2001 12:52p 15,132 vmdebug.c
 12/28/2001 12:52p 635 vmdisc.c
 10 12/28/2001 12:52p 1,017 vmexit.c
 12/28/2001 12:52p 15,733 vmhdr.h
 12/28/2001 12:52p 9,222 vmlast.c
 12/28/2001 12:52p 3,838 vmopen.c
 12/28/2001 12:52p 6,313 vmppool.c
 12/28/2001 12:52p 6,366 vmprivate.c
 12/28/2001 12:52p 15,618 vmprofile.c
 12/28/2001 12:52p 379 vmregion.c
 12/28/2001 12:52p 680 vmsegment.c
 12/28/2001 12:52p 781 vmset.c
 12/28/2001 12:52p 2,209 vmstat.c
 12/28/2001 12:52p 256 vmstrdup.c
 12/28/2001 12:52p 4,072 vmtrace.c
 12/28/2001 12:52p 1,011 vmwalk.c

27 File(s) 163,052 bytes

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Directory of F:\Send\ExtLibraries\graphviz-1.7.7\tools\vmalloc\features

12/28/2001 12:52p 8,960 common
 12/28/2001 12:52p 1,998 vmalloc

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2 File(s) 10,958 bytes

Directory of F:\Send\ExtLibraries\graphviz-1.7.7\tools\vmalloc\features\CVS

12/28/2001 12:52p 84 Entries
 5 12/28/2001 12:52p 33 Repository
 12/28/2001 12:52p 40 Root
 3 File(s) 157 bytes

Directory of F:\Send\ExtLibraries\jasp-1.1

10 12/28/2001 12:52p 256,484 crimson.jar.b64
 12/28/2001 12:52p 2,717 install.html
 12/28/2001 12:52p 38,924 jasp.jar.b64
 12/28/2001 12:52p 2,739 License-ASF
 5 12/28/2001 12:52p 11,407 License-RI.html
 12/28/2001 12:52p 4,826 License-W3C.html
 12/28/2001 12:52p 7,401 readme.html
 12/28/2001 12:52p 9,028 relnotes.html
 12/28/2001 12:52p 1,098,646 xalan.jar.b64
 20 9 File(s) 1,432,172 bytes

Directory of F:\Send\ExtLibraries\jdk1.3.1\include

12/28/2001 12:52p 7,839 jawt.h
 25 12/28/2001 12:52p 68,634 jni.h
 12/28/2001 12:52p 38,119 jvmdi.h
 12/28/2001 12:52p 22,693 jvmpi.h
 4 File(s) 137,285 bytes

Directory of F:\Send\ExtLibraries\jdk1.3.1\include\win32

12/28/2001 12:52p 960 jawt_md.h
 12/28/2001 12:52p 518 jni_md.h
 2 File(s) 1,478 bytes

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Directory of F:\Send\ExtLibraries\jdom-b7

12/28/2001 12:52p 677 build.bat
 12/28/2001 12:52p 913 build.sh
 10 12/28/2001 12:52p 10,907 build.xml
 12/28/2001 12:52p 400 build11.bat
 12/28/2001 12:52p 545 build11.sh
 12/28/2001 12:52p 20,969 CHANGES.txt
 12/28/2001 12:52p 379 COMMITTERS.txt
 5 12/28/2001 12:52p 2,581 LICENSE.txt
 12/28/2001 12:52p 3,215 README.txt
 12/28/2001 12:52p 15,391 TODO.txt
 10 File(s) 55,977 bytes

Directory of F:\Send\ExtLibraries\jdom-b7\build

12/28/2001 12:52p 145,830 jdom.jar.b64
 1 File(s) 145,830 bytes

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Directory of F:\Send\ExtLibraries\Libs\pc\GraphVizLib

12/28/2001 12:52p 1,056 edbuild-sh
 12/28/2001 12:52p 14,353 GraphVizLib.dsp
 2 File(s) 15,409 bytes

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Directory of F:\Send\ExtLibraries\Libs\pc\libsndfile

12/28/2001 12:52p 7,658 libsndfile.dsp
 1 File(s) 7,658 bytes

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Directory of F:\Send\ExtLibraries\libsndfile

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12/28/2001 12:52p 8,453 acconfig.h
 12/28/2001 12:52p 18,853 aclocal.m4
 12/28/2001 12:52p 638 AUTHORS
 12/28/2001 12:52p 39,843 ChangeLog
 12/28/2001 12:52p 1,503 check_libsndfile.py
 12/28/2001 12:52p 34,268 config.guess
 12/28/2001 12:52p 26,511 config.sub
 12/28/2001 12:52p 87,543 configure
 12/28/2001 12:52p 4,895 configure.in
 12/28/2001 12:52p 27,021 COPYING
 12/28/2001 12:52p 8,013 INSTALL
 12/28/2001 12:52p 2,305 install-sh
 12/28/2001 12:52p 1,587 libsndfile.spec
 12/28/2001 12:52p 1,589 libsndfile.spec.in
 12/28/2001 12:52p 100,826 ltconfig
 12/28/2001 12:52p 114,790 ltmain.sh
 12/28/2001 12:52p 168 Makefile.am
 12/28/2001 12:52p 11,694 Makefile.in
 12/28/2001 12:52p 6,462 missing
 12/28/2001 12:52p 772 mkinstalldirs
 12/28/2001 12:52p 3,030 NEWS
 12/28/2001 12:52p 2,237 README
 12/28/2001 12:52p 170 reconf

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12/28/2001 12:52p 1,804 TODO
 24 File(s) 504,975 bytes

Directory of F:\Send\ExtLibraries\libsndfile\doc

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12/28/2001 12:52p 18,765 api.html
 12/28/2001 12:52p 1,903 bugs.html
 12/28/2001 12:52p 39,261 ChangeLog
 12/28/2001 12:52p 12,380 index.html
 10 12/28/2001 12:52p 99 Makefile.am
 12/28/2001 12:52p 4,775 Makefile.in
 12/28/2001 12:52p 3,030 NEWS
 12/28/2001 12:52p 4,450 new_file_type.HOWTO
 12/28/2001 12:52p 1,261 sf_info.html
 9 File(s) 85,924 bytes

Directory of F:\Send\ExtLibraries\libsndfile\examples

12/28/2001 12:52p 874 Makefile.am
 12/28/2001 12:52p 12,354 Makefile.in
 12/28/2001 12:52p 2,416 make_sine.c
 12/28/2001 12:52p 7,215 sfconvert.c
 12/28/2001 12:52p 2,472 sfdump.c
 12/28/2001 12:52p 2,116 sfhexdump.c
 25 12/28/2001 12:52p 1,298 sfprocess.c
 12/28/2001 12:52p 2,869 sndfile2oct.c
 12/28/2001 12:52p 2,557 sndfile_info.c
 12/28/2001 12:52p 3,150 wav32_aiff24.c
 10 File(s) 37,321 bytes

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Directory of F:\Send\ExtLibraries\libsndfile\MacOS

12/28/2001 12:52p 2,335 config.h
 12/28/2001 12:52p 2,442 MacOS-readme.txt
 5 12/28/2001 12:52p 41 Makefile.am
 12/28/2001 12:52p 4,706 Makefile.in
 4 File(s) 9,524 bytes

Directory of F:\Send\ExtLibraries\libsndfile\src

10

12/28/2001 12:52p 22,235 aiff.c
 12/28/2001 12:52p 27,295 alaw.c
 12/28/2001 12:52p 16,173 au.c
 12/28/2001 12:52p 1,089 au.h
 12/28/2001 12:52p 16,082 au_g72x.c
 12/28/2001 12:52p 19,912 common.c
 12/28/2001 12:52p 10,043 common.h
 12/28/2001 12:52p 2,122 config.h.in
 12/28/2001 12:52p 30,476 float32.c
 12/28/2001 12:52p 1,533 floatcast.h
 12/28/2001 12:52p 10,467 ircam.c
 12/28/2001 12:52p 723 Makefile.am
 12/28/2001 12:52p 15,605 Makefile.in
 12/28/2001 12:52p 7,990 nist.c
 25 12/28/2001 12:52p 24,513 paf.c
 12/28/2001 12:52p 85,049 pcm.c
 12/28/2001 12:52p 4,788 raw.c
 12/28/2001 12:52p 3,432 samplitude.c
 12/28/2001 12:52p 2,870 sfendian.h
 30 12/28/2001 12:52p 43,936 sndfile.c

12/28/2001 12:52p 8,903 sndfile.h
 12/28/2001 12:52p 11 stamp-h.in
 12/28/2001 12:52p 12,055 svx.c
 12/28/2001 12:52p 65,646 ulaw.c
 5 12/28/2001 12:52p 11,216 voc.c
 12/28/2001 12:52p 37,252 wav.c
 12/28/2001 12:52p 3,063 wav.h
 12/28/2001 12:52p 19,251 wav_gsm610.c
 12/28/2001 12:52p 24,617 wav_ima_adpcm.c
 10 12/28/2001 12:52p 28,179 wav_ms_adpcm.c
 30 File(s) 556,526 bytes

Directory of F:\Send\ExtLibraries\libsndfile\src\G72x

12/28/2001 12:52p 1,968 ChangeLog
 12/28/2001 12:52p 4,917 g721.c
 12/28/2001 12:52p 5,655 g723_16.c
 12/28/2001 12:52p 4,273 g723_24.c
 12/28/2001 12:52p 5,163 g723_40.c
 20 12/28/2001 12:52p 16,370 g72x.c
 12/28/2001 12:52p 3,982 g72x.h
 12/28/2001 12:52p 327 Makefile.am
 12/28/2001 12:52p 8,307 Makefile.in
 12/28/2001 12:52p 3,954 private.h
 25 12/28/2001 12:52p 0 README
 12/28/2001 12:52p 3,311 README.original
 12 File(s) 58,227 bytes

Directory of F:\Send\ExtLibraries\libsndfile\src\GSM610

5 12/28/2001 12:52p 6,053 add.c

12/28/2001 12:52p 659 ChangeLog

12/28/2001 12:52p 2,566 code.c

12/28/2001 12:52p 924 config.h

12/28/2001 12:52p 706 COPYRIGHT

12/28/2001 12:52p 1,633 decode.c

12/28/2001 12:52p 1,752 gsm.h

10 12/28/2001 12:52p 901 gsm_create.c

12/28/2001 12:52p 11,027 gsm_decode.c

12/28/2001 12:52p 595 gsm_destroy.c

12/28/2001 12:52p 11,877 gsm_encode.c

12/28/2001 12:52p 1,274 gsm_option.c

12/28/2001 12:52p 24,536 long_term.c

12/28/2001 12:52p 7,430 lpc.c

12/28/2001 12:52p 451 Makefile.am

12/28/2001 12:52p 9,304 Makefile.in

12/28/2001 12:52p 2,626 preprocess.c

20 12/28/2001 12:52p 8,195 private.h

12/28/2001 12:52p 1,680 proto.h

12/28/2001 12:52p 1,460 README

12/28/2001 12:52p 11,548 rpe.c

12/28/2001 12:52p 10,831 short_term.c

25 12/28/2001 12:52p 2,210 table.c

12/28/2001 12:52p 495 unproto.h

24 File(s) 120,733 bytes

Directory of F:\Send\ExtLibraries\libsndfile\tests

5 12/28/2001 12:52p 6,490 alaw_test.c
 12/28/2001 12:52p 1,683 check_log_buffer.c
 12/28/2001 12:52p 942 check_log_buffer.h
 12/28/2001 12:52p 6,625 command_test.c
 12/28/2001 12:52p 1,603 error_test.c
 12/28/2001 12:52p 11,189 floating_point_test.c
 12/28/2001 12:52p 67,385 lossy_comp_test.c
 10 12/28/2001 12:52p 5,568 Makefile.am
 12/28/2001 12:52p 18,745 Makefile.in
 12/28/2001 12:52p 6,286 peak_chunk_test.c
 12/28/2001 12:52p 26,593 read_seek_test.c
 12/28/2001 12:52p 1,636 sftest.c
 12/28/2001 12:52p 1,118 sfversion.c
 12/28/2001 12:52p 3,749 stdin_test.c
 12/28/2001 12:52p 2,753 stdio_test.c
 12/28/2001 12:52p 3,550 stdout_test.c
 12/28/2001 12:52p 7,636 ulaw_test.c
 12/28/2001 12:52p 49,351 write_read_test.c
 18 File(s) 222,902 bytes

Directory of F:\Send\ExtLibraries\libsndfile\Win32

25 12/28/2001 12:52p 2,353 config.h
 12/28/2001 12:52p 84 Makefile.am
 12/28/2001 12:52p 4,742 Makefile.in
 12/28/2001 12:52p 3,619 README-Win32.txt
 12/28/2001 12:52p 1,360 README-Win32.txt.old
 30 12/28/2001 12:52p 1,729 unistd.h

6 File(s) 13,887 bytes

Directory of F:\Send\ExtLibraries\monarch

5 12/28/2001 12:52p 6,964 license.html
 12/28/2001 12:52p 2,207 readme.txt
 2 File(s) 9,171 bytes

Directory of F:\Send\ExtLibraries\monarch\lib

10

12/28/2001 12:52p 167,738 mgraph.jar.b64
 1 File(s) 167,738 bytes

Directory of F:\Send\ExtLibraries\zlib-1.1.3

15

12/28/2001 12:52p 1,293 Adler32.c
 12/28/2001 12:52p 9,869 algorithm.txt
 12/28/2001 12:52p 24,017 ChangeLog
 12/28/2001 12:52p 2,204 compress.c
 12/28/2001 12:52p 6,840 configure
 12/28/2001 12:52p 7,136 crc32.c
 12/28/2001 12:52p 50,333 deflate.c
 12/28/2001 12:52p 11,925 deflate.h
 12/28/2001 12:52p 1,596 descrip.mms
 25 12/28/2001 12:52p 16,406 example.c
 12/28/2001 12:52p 2,322 FAQ
 12/28/2001 12:52p 26,616 gzio.c
 12/28/2001 12:52p 2,588 INDEX
 12/28/2001 12:52p 12,750 infblock.c
 30 12/28/2001 12:52p 1,253 infblock.h

	12/28/2001 12:52p	8,052 infcodes.c
	12/28/2001 12:52p	764 infcodes.h
	12/28/2001 12:52p	5,815 inffast.c
	12/28/2001 12:52p	505 inffast.h
5	12/28/2001 12:52p	9,079 inffixed.h
	12/28/2001 12:52p	10,022 inflate.c
	12/28/2001 12:52p	16,529 inftrees.c
	12/28/2001 12:52p	2,674 inftrees.h
	12/28/2001 12:52p	2,086 infutil.c
10	12/28/2001 12:52p	3,777 infutil.h
	12/28/2001 12:52p	5,472 Makefile
	12/28/2001 12:52p	5,451 Makefile.in
	12/28/2001 12:52p	3,927 Makefile.riscos
	12/28/2001 12:52p	2,548 maketree.c
	12/28/2001 12:52p	3,899 Make_vms.com
	12/28/2001 12:52p	8,170 minigzip.c
	12/28/2001 12:52p	7,254 README
	12/28/2001 12:52p	44,886 trees.c
	12/28/2001 12:52p	8,572 trees.h
	12/28/2001 12:52p	2,039 uncompr.c
	12/28/2001 12:52p	8,089 zconf.h
	12/28/2001 12:52p	3,387 zlib.3
	12/28/2001 12:52p	41,791 zlib.h
	12/28/2001 12:52p	5,457 zutil.c
25	12/28/2001 12:52p	5,780 zutil.h
	40 File(s)	393,173 bytes

Directory of F:\Send\ExtLibraries\zlib-1.1.3\amiga

30	12/28/2001 12:52p	2,199 Makefile.pup
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12/28/2001 12:52p 1,881 Makefile.sas
 2 File(s) 4,080 bytes

Directory of F:\Send\ExtLibraries\zlib-1.1.3\contrib

5

12/28/2001 12:52p 1,341 README.contrib
 12/28/2001 12:52p 2,635 visual-basic.txt
 2 File(s) 3,976 bytes

10

Directory of F:\Send\ExtLibraries\zlib-1.1.3\contrib\asm386

12/28/2001 12:52p 14,823 gvm32.asm
 12/28/2001 12:52p 7,196 gvm32c.c
 12/28/2001 12:52p 59 mkgvmt32.bat
 12/28/2001 12:52p 2,482 zlibvc.def
 12/28/2001 12:52p 17,177 zlibvc.dsp
 12/28/2001 12:52p 726 zlibvc.dsw
 6 File(s) 42,463 bytes

Directory of F:\Send\ExtLibraries\zlib-1.1.3\contrib\asm586

12/28/2001 12:52p 10,582 match.S
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 2 File(s) 12,240 bytes

25

Directory of F:\Send\ExtLibraries\zlib-1.1.3\contrib\asm686

12/28/2001 12:52p 9,336 match.S
 12/28/2001 12:52p 1,083 README.686
 2 File(s) 10,419 bytes

30

Directory of F:\Send\ExtLibraries\zlib-1.1.3\contrib\delphi

12/28/2001 12:52p 1,005 zlib.mak
 5 12/28/2001 12:52p 5,568 zlibdef.pas
 2 File(s) 6,573 bytes

Directory of F:\Send\ExtLibraries\zlib-1.1.3\contrib\delphi2

10 12/28/2001 12:52p 5,287 d_zlib.bpr
 12/28/2001 12:52p 498 d_zlib.cpp
 12/28/2001 12:52p 670 readme.txt
 12/28/2001 12:52p 817 zlib.bpg
 12/28/2001 12:52p 5,338 zlib.bpr
 12/28/2001 12:52p 607 zlib.cpp
 12/28/2001 12:52p 16,644 zlib.pas
 12/28/2001 12:52p 4,581 zlib32.bpr
 12/28/2001 12:52p 1,488 zlib32.cpp
 9 File(s) 35,930 bytes

Directory of F:\Send\ExtLibraries\zlib-1.1.3\contrib\iostream

12/28/2001 12:52p 550 test.cpp
 12/28/2001 12:52p 5,375 zfstream.cpp
 25 12/28/2001 12:52p 2,639 zfstream.h
 3 File(s) 8,564 bytes

Directory of F:\Send\ExtLibraries\zlib-1.1.3\contrib\iostream2

30 12/28/2001 12:52p 9,590 zstream.h

12/28/2001 12:52p 727 zstream_test.cpp
 2 File(s) 10,317 bytes

Directory of F:\Send\ExtLibraries\zlib-1.1.3\contrib\minizip

5

12/28/2001 12:52p 1,341 ChangeLogUnzip
 12/28/2001 12:52p 466 Makefile
 12/28/2001 12:52p 11,729 miniunz.c
 12/28/2001 12:52p 7,830 minizip.c
 12/28/2001 12:52p 1,412 readme.txt
 12/28/2001 12:52p 35,835 unzip.c
 12/28/2001 12:52p 540 unzip.def
 12/28/2001 12:52p 10,205 unzip.h
 12/28/2001 12:52p 22,005 zip.c
 12/28/2001 12:52p 180 zip.def
 12/28/2001 12:52p 5,240 zip.h
 12/28/2001 12:52p 2,482 zlibvc.def
 12/28/2001 12:52p 17,177 zlibvc.dsp
 12/28/2001 12:52p 726 zlibvc.dsw

14 File(s) 117,168 bytes

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12/28/2001 12:52p 237 Makefile
 12/28/2001 12:52p 1,194 makefile.w32
 12/28/2001 12:52p 11,361 untgz.c

3 File(s) 12,792 bytes

Directory of F:\Send\ExtLibraries\zlib-1.1.3\msdos

12/28/2001 12:52p 2,868 Makefile.b32
 12/28/2001 12:52p 3,422 Makefile.bor
 5 12/28/2001 12:52p 2,636 Makefile.dj2
 12/28/2001 12:52p 1,507 Makefile.emx
 12/28/2001 12:52p 3,416 Makefile.msc
 12/28/2001 12:52p 2,901 Makefile.tc
 12/28/2001 12:52p 2,750 Makefile.w32
 10 12/28/2001 12:52p 2,814 Makefile.wat
 12/28/2001 12:52p 1,857 zlib.def
 12/28/2001 12:52p 927 zlib.rc
 10 File(s) 25,098 bytes

Directory of F:\Send\ExtLibraries\zlib-1.1.3\nt

12/28/2001 12:52p 3,023 Makefile.emx
 12/28/2001 12:52p 2,116 Makefile.gcc
 12/28/2001 12:52p 2,326 Makefile.nt
 20 12/28/2001 12:52p 1,749 zlib.dnt
 4 File(s) 9,214 bytes

Directory of F:\Send\ExtLibraries\zlib-1.1.3\os2

25 12/28/2001 12:52p 4,246 Makefile.os2
 12/28/2001 12:52p 829 zlib.def
 2 File(s) 5,075 bytes

Directory of F:\Send\ExtTools\base64-1.3

5 12/28/2001 12:52p 3,526 base64.1
 12/28/2001 12:52p 6,812 base64.c
 12/28/2001 12:52p 17,513 base64.w
 12/28/2001 12:52p 598 config.h.in
 12/28/2001 12:52p 48,728 configure
 12/28/2001 12:52p 632 configure.in
 12/28/2001 12:52p 294 COPYING
 10 12/28/2001 12:52p 4,990 getopt.c
 12/28/2001 12:52p 334 getopt.h
 12/28/2001 12:52p 5,771 index.html
 12/28/2001 12:52p 843 INSTALL
 12/28/2001 12:52p 5,003 install-sh
 12/28/2001 12:52p 6,415 Makefile.in
 12/28/2001 12:52p 1,446 README
 12/28/2001 12:52p 8,974 rfc1341.html
 12/28/2001 12:52p 7,511 rfc1341.txt
 16 File(s) 119,390 bytes

Directory of F:\Send\Tools\AudioPlayer

12/28/2001 12:52p 1,403 AudioPlayer.cpp
 12/28/2001 12:52p 5,371 AudioPlayer.dsp
 25 12/28/2001 12:52p 1,265 AudioPlayer.dsw
 12/28/2001 12:52p 722 AudioPlayer.h
 12/28/2001 12:52p 2,806 AudioPlayerJNI.cpp
 12/28/2001 12:52p 2,255 AudioPlayerJNI.h
 12/28/2001 12:52p 4,102 CPlayer.cpp
 30 12/28/2001 12:52p 1,268 CPlayer.h

12/28/2001 12:52p 90 makejni.bat
 12/28/2001 12:52p 1,643 ReadMe.txt
 10 File(s) 20,925 bytes

5 Directory of F:\Send\Tools\DDLOpen

12/28/2001 12:52p 5,399 DDLOpen.cpp
 12/28/2001 12:52p 4,840 DDLOpen.dsp
 12/28/2001 12:52p 9,736 EnumProc.cpp
 10 12/28/2001 12:52p 578 EnumProc.h
 12/28/2001 12:52p 1,047 MediaMap.h
 12/28/2001 12:52p 1,619 ReadMe.txt
 12/28/2001 12:52p 294 StdAfx.cpp
 12/28/2001 12:52p 802 StdAfx.h
 8 File(s) 24,315 bytes

Directory of F:\Send\Tools\GraphViz

12/28/2001 12:52p 625 GraphViz.cpp
 12/28/2001 12:52p 5,341 GraphViz.dsp
 12/28/2001 12:52p 1,259 GraphViz.dsw
 12/28/2001 12:52p 5,908 GraphVizJNI.cpp
 12/28/2001 12:52p 701 GraphVizJNI.h
 12/28/2001 12:52p 88 makejni.bat
 25 12/28/2001 12:52p 1,625 ReadMe.txt
 7 File(s) 15,547 bytes

Directory of F:\Send\Tools\Talks

30 12/28/2001 12:52p 1,035 buildme.bat

12/28/2001 12:52p 544 Talks.html

2 File(s) 1,579 bytes

Directory of F:\Send\Tools\Talks\classes\jellyvision\uber1\graphics

5

12/28/2001 12:52p 1,280 addsfx.gif.b64

12/28/2001 12:52p 1,280 approveaudio.gif.b64

12/28/2001 12:52p 1,296 approvevideo.gif.b64

12/28/2001 12:52p 1,264 audio.gif.b64

10

12/28/2001 12:52p 1,284 audiomoment.gif.b64

12/28/2001 12:52p 1,222 audiomomentnomedia.gif.b64

12/28/2001 12:52p 1,284 audiomomentsomemedia.gif.b64

12/28/2001 12:52p 1,246 downarrow.gif.b64

12/28/2001 12:52p 1,246 folder1.gif.b64

12/28/2001 12:52p 1,258 folder2.gif.b64

12/28/2001 12:52p 1,320 nixaudio.gif.b64

12/28/2001 12:52p 1,332 nixvideo.gif.b64

12/28/2001 12:52p 1,246 nomedia.gif.b64

12/28/2001 12:52p 1,206 spin1.gif.b64

12/28/2001 12:52p 1,198 spin2.gif.b64

12/28/2001 12:52p 1,206 spin3.gif.b64

12/28/2001 12:52p 1,198 spin4.gif.b64

12/28/2001 12:52p 1,272 textmoment.gif.b64

12/28/2001 12:52p 1,268 video.gif.b64

25

19 File(s) 23,906 bytes

Directory of F:\Send\Tools\Talks\src

12/28/2001 12:52p 501 app.xml

30

12/28/2001 12:52p 101 MANIFEST.MF

12/28/2001 12:52p 95 run.bat
 12/28/2001 12:52p 18,698 sfx.aif.b64
 12/28/2001 12:52p 62 template.wav.b64
 12/28/2001 12:52p 1,031 Trap.java

5 6 File(s) 20,488 bytes

Directory of F:\Send\Tools\Talks\src\jellyvision\uber1

12/28/2001 12:52p 3,586 AppPrefs.java
 12/28/2001 12:52p 1,568 AppUndoManager.java
 12/28/2001 12:52p 7,551 CommandWindow.java
 12/28/2001 12:52p 1,820 MainApp.java
 12/28/2001 12:52p 14,708 MainFrame.java
 12/28/2001 12:52p 5,804 MediaView.java
 12/28/2001 12:52p 5,893 PlaybackView.java
 12/28/2001 12:52p 10,479 TestLink.java
 12/28/2001 12:52p 489 ToolWindow.java

9 File(s) 51,898 bytes

Directory of F:\Send\Tools\Talks\src\jellyvision\uber1\editor

12/28/2001 12:52p 4,782 AddPrefScreen.java
 12/28/2001 12:52p 12,709 ConditionCellEditor.java
 12/28/2001 12:52p 2,335 ConditionPref.java
 12/28/2001 12:52p 2,540 ConditionPrefView.java
 12/28/2001 12:52p 6,556 DialogueCellEditor.java
 12/28/2001 12:52p 1,969 DialoguePref.java
 12/28/2001 12:52p 2,540 DialoguePrefView.java
 12/28/2001 12:52p 2,449 FieldEditor.java
 12/28/2001 12:52p 1,826 FocusWatcher.java

	12/28/2001 12:52p	662 IEditor.java
	12/28/2001 12:52p	10,815 NoteText.java
	12/28/2001 12:52p	3,597 OptionEditor.java
	12/28/2001 12:52p	1,118 Pref.java
5	12/28/2001 12:52p	5,506 ScriptCommands.java
	12/28/2001 12:52p	6,657 ScriptPrefs.java
	12/28/2001 12:52p	16,505 ScriptView.java
	12/28/2001 12:52p	3,682 TextEditor.java
	17 File(s)	86,248 bytes

10

Directory of F:\Send\Tools\Talks\src\jellyvision\uber1\flowchart

	12/28/2001 12:52p	11,665 ContextAdapter.java
	12/28/2001 12:52p	7,594 CurvedLink.java
	12/28/2001 12:52p	827 DisableLayout.java
	12/28/2001 12:52p	9,678 FixedDiamondNode.java
	12/28/2001 12:52p	1,490 FlowchartColors.java
	12/28/2001 12:52p	1,468 GraphView2.java
	12/28/2001 12:52p	11,832 GraphViz.java
	12/28/2001 12:52p	785 IfEraser.java
	12/28/2001 12:52p	9,251 IfLink.java
	12/28/2001 12:52p	3,455 IfPin.java
	12/28/2001 12:52p	1,719 LabelMeasure.java
	12/28/2001 12:52p	4,043 LayoutInfo.java
25	12/28/2001 12:52p	3,927 LinkDragStrategy.java
	12/28/2001 12:52p	6,642 LinkFactory.java
	12/28/2001 12:52p	20,229 Model.java
	12/28/2001 12:52p	1,847 OutputPin.java
	12/28/2001 12:52p	792 Pin.java
30	12/28/2001 12:52p	1,762 PinTable.java

	12/28/2001 12:52p	2,871 StubView.java
	12/28/2001 12:52p	9,318 ViewFactory.java
	12/28/2001 12:52p	9,886 WordBreakBlock.java
	12/28/2001 12:52p	736 WordWrapTextBox.java
5	12/28/2001 12:52p	3,654 ZoomManager.java
	23 File(s)	125,471 bytes

Directory of F:\Send\Tools\Talks\src\jellyvision\uber1\flowchart\change

10	12/28/2001 12:52p	1,458 AliasChange.java
	12/28/2001 12:52p	1,571 AliasChangeCondition.java
	12/28/2001 12:52p	1,700 AudioMomentDescriptionChange.java
	12/28/2001 12:52p	843 CellCommand.java
	12/28/2001 12:52p	1,313 CellCreated.java
	12/28/2001 12:52p	1,558 CellCreatedBatch.java
	12/28/2001 12:52p	1,580 CellDeleted.java
	12/28/2001 12:52p	1,707 ConditionAdd.java
	12/28/2001 12:52p	1,353 ConditionCurrentChange.java
	12/28/2001 12:52p	1,236 ConditionDescriptionChange.java
	12/28/2001 12:52p	1,852 ConditionRemove.java
	12/28/2001 12:52p	1,621 HostChange.java
	12/28/2001 12:52p	2,637 LinkChange.java
	12/28/2001 12:52p	995 MediaChoice.java
	12/28/2001 12:52p	1,341 OptionDescriptionChange.java
25	12/28/2001 12:52p	2,803 OptionLinkChange.java
	16 File(s)	25,568 bytes

Directory of F:\Send\Tools\Talks\src\jellyvision\uber1\media

30	12/28/2001 12:52p	804 AssetNode.java
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12/28/2001 12:52p 3,110 AssetTree.java
 12/28/2001 12:52p 8,658 AssetView.java
 12/28/2001 12:52p 2,513 AudioClip.java
 12/28/2001 12:52p 34,536 AudioMomentEditor.java
 5 12/28/2001 12:52p 1,872 AudioMomentNode.java
 12/28/2001 12:52p 4,966 ComplexCellNode.java
 12/28/2001 12:52p 20,490 CueCard.java
 12/28/2001 12:52p 1,080 FolderNode.java
 12/28/2001 12:52p 4,227 MediaMap.java
 10 12/28/2001 12:52p 1,822 MediaNode.java
 12/28/2001 12:52p 1,503 MenuMap.java
 12/28/2001 12:52p 1,071 MomentEditor.java
 12/28/2001 12:52p 3,354 OrphanFolderNode.java
 14 File(s) 90,006 bytes

Directory of F:\Send\Tools\Talks\src\jellyvision\uber1\media\change

12/28/2001 12:52p 1,062 AudioMomentDescriptionChange.java
 12/28/2001 12:52p 1,006 AudioMomentReference.java
 12/28/2001 12:52p 1,007 AudioMomentRemove.java
 12/28/2001 12:52p 796 HostChange.java
 12/28/2001 12:52p 780 VersionChange.java
 5 File(s) 4,651 bytes

25 Directory of F:\Send\Tools\Talks\src\jellyvision\uber1\model

12/28/2001 12:52p 800 AliasCell.java
 12/28/2001 12:52p 3,891 AlphaNumericIDTable.java
 12/28/2001 12:52p 835 AssetInfo.java
 30 12/28/2001 12:52p 8,340 AudioMoment.java

	12/28/2001 12:52p	2,819 AudioMomentTable.java
	12/28/2001 12:52p	3,447 AudioVersion.java
	12/28/2001 12:52p	5,002 Cell.java
	12/28/2001 12:52p	5,152 CellTable.java
5	12/28/2001 12:52p	1,542 CommandQueue.java
	12/28/2001 12:52p	729 ComplexCell.java
	12/28/2001 12:52p	995 ConditionAlias.java
	12/28/2001 12:52p	13,554 ConditionCell.java
	12/28/2001 12:52p	15,111 Context.java
10	12/28/2001 12:52p	1,437 Controller.java
	12/28/2001 12:52p	2,789 DefaultComplexCell.java
	12/28/2001 12:52p	2,568 DeleteCommand.java
	12/28/2001 12:52p	3,653 DialogueCell.java
	12/28/2001 12:52p	1,675 DragAudioMomentInfo.java
	12/28/2001 12:52p	2,224 FlowchartSync.java
	12/28/2001 12:52p	898 MediaSync.java
	12/28/2001 12:52p	640 MediaType.java
	12/28/2001 12:52p	1,767 ModelUndoCommand.java
	12/28/2001 12:52p	734 NodeType.java
	12/28/2001 12:52p	4,675 ProjectFile.java
	12/28/2001 12:52p	4,605 ProjectFileUI.java
	12/28/2001 12:52p	1,550 ReDeleteCommand.java
	12/28/2001 12:52p	966 SingleLinkAlias.java
	12/28/2001 12:52p	4,117 SingleLinkCell.java
25	12/28/2001 12:52p	3,822 SinglePath.java
	12/28/2001 12:52p	2,110 StateCommand.java
	12/28/2001 12:52p	1,005 UndoController.java
	12/28/2001 12:52p	1,942 UndoNames.java
	12/28/2001 12:52p	1,225 XMLTags.java
30	33 File(s)	106,619 bytes

Directory of F:\Send\Tools\Talks\src\jellyvision\uber1\model\change

5 12/28/2001 12:52p 851 AliasChange.java
 12/28/2001 12:52p 934 AliasChangeCondition.java
 12/28/2001 12:52p 880 AudioMomentDescriptionChange.java
 12/28/2001 12:52p 1,054 AudioMomentRemove.java
 12/28/2001 12:52p 776 CellCommand.java
 12/28/2001 12:52p 1,790 CellCreated.java
 10 12/28/2001 12:52p 1,075 ConditionAdd.java
 12/28/2001 12:52p 868 ConditionDescriptionChange.java
 12/28/2001 12:52p 985 ConditionRemove.java
 12/28/2001 12:52p 795 HostChange.java
 12/28/2001 12:52p 1,887 LinkChange.java
 5 12/28/2001 12:52p 947 OptionCommand.java
 12/28/2001 12:52p 875 OptionDescriptionChange.java
 12/28/2001 12:52p 2,100 OptionLinkChange.java
 14 File(s) 15,817 bytes

Directory of F:\Send\Tools\Talks\src\jellyvision\uber1\playback

12/28/2001 12:52p 6,147 DisplayDocument.java
 12/28/2001 12:52p 4,355 Playback.java
 12/28/2001 12:52p 650 PlayCell.java
 25 12/28/2001 12:52p 3,621 PlayCondition.java
 12/28/2001 12:52p 4,872 PlayDialogue.java
 12/28/2001 12:52p 3,398 RandomNoRepeat.java
 12/28/2001 12:52p 2,894 TextDisplay.java
 12/28/2001 12:52p 2,854 TimeLine.java
 30 8 File(s) 28,791 bytes

Directory of F:\Send\Tools\Talks\src\jellyvision\uber1\utils

12/28/2001 12:52p 3,169 AudioPlayer.java
 12/28/2001 12:52p 2,319 CenterDeleteString.java
 12/28/2001 12:52p 1,863 DragLinkStart.java
 12/28/2001 12:52p 2,065 DragLinkTarget.java
 12/28/2001 12:52p 1,624 GlassPane.java
 12/28/2001 12:52p 1,508 ReadOnlyListIterator.java
 12/28/2001 12:52p 1,661 StyleRun.java
 12/28/2001 12:52p 3,310 TextMeasure.java
 12/28/2001 12:52p 4,808 UberIcon.java
 12/28/2001 12:52p 1,558 Utilities.java
 10 File(s) 23,885 bytes

Total Files Listed:

1505 File(s) 12,813,537 bytes

0 Dir(s) 0 bytes free

Background

Flowcharts are often used to show a graphical representation of cells. Flowcharts can be prepared by hand using pencil and paper or can be prepared electronically using a computer. Some software applications require a user to build a flowchart by drawing graphical shapes and then typing text into each graphical shape. If there are many branches in the flowchart, it can be difficult for a user to isolate a single path among the various paths. This can happen, for example, if the user is creating a flowchart to structurally represent a multimedia experience since a reasonably sophisticated experience can generate a flowchart that is quite large and unwieldy, with hundreds or thousands of cells and complex branching between the cells. Another difficulty encountered with structurally representing a multimedia experience is that creating a flowchart using existing tools can pull creative focus away from developing the

experience. One approach to author-centric multimedia creation is presented in U.S. Patent No. 6,100,881 to Gibbons et al. However, among its deficiencies as a multimedia creation tool, the approach described in Gibbons et al. is not directed to flowcharts.

There is a need, therefore, for a method that can be used to overcome the disadvantages discussed above.

Summary

The present invention is defined by the following claims, and nothing in this section should be taken as a limitation on those claims.

By way of introduction, the preferred embodiments described below provide methods for identifying cells in a path in a flowchart and for synchronizing graphical and textual views of a flowchart. In one preferred embodiment, a method for identifying cells in a path in a flowchart is provided comprising the acts of displaying a flowchart comprising a plurality of cells, selecting a cell in the flowchart, determining a path comprising the selected cell, and identifying at least some of the cells in the path. In another preferred embodiment, a method for synchronizing graphical and textual views of a flowchart is provided. This method comprises the acts of displaying a graphical view of a flowchart comprising a plurality of cells in a first display region, displaying a textual view of at least some cells in the flowchart in a second display region, and in response to input received in either the first or second display regions, applying the input to both the first and second display regions. Other preferred embodiments are provided, and each of the preferred embodiments can be used alone or in combination with one another.

The preferred embodiments will now be described with reference to the attached drawings.

Brief Description of the Drawings

Figure 1 is an illustration of a preferred embodiment in which a path from cell 1 to cell 12 is identified in first and second display regions.

Figure 2 is an illustration of a preferred embodiment in which a path from cell 1 to cell 3 is identified in first and second display regions.

Figure 3 is an illustration of a preferred embodiment in which a path from cell 1 to cell 12 is identified in first and second display regions.

Figure 4 is an illustration of a preferred embodiment in which a path from cell 1 through cell 3 to cell 10 is identified in first and second display regions.

Figure 5 is an illustration of a preferred embodiment in which a path from cell 1 through cell 7 to cell 10 is identified in first and second display regions.

Figures 6A and 6B are illustrations of a preferred embodiment in which a new cell is inserted in Structure and Script Windows.

Figure 7 is an illustration of a preferred embodiment in which a new conditional cell is inserted in Structure and Script Windows below the cell created in Figures 6A and 6B.

Figure 8 is an illustration of a preferred embodiment in which a current path from the conditional cell created in Figure 7 is indicated in both the Script Window and the Structure Window.

Figure 9 is an illustration of a preferred embodiment in which additional cells have been created in the current path indicated in the Script Window of Figure 8.

Figure 10 is an illustration of a preferred embodiment in which a different path from the conditional cell created in Figure 7 is indicated in both the Script Window and the Structure Window.

Figure 11 is an illustration of a preferred embodiment in which cell 4 has been deleted from the Structure and Script Windows.

Detailed Description of the Presently Preferred Embodiments

Introduction

The preferred embodiments described herein are preferably implemented using software and/or hardware components. For example, the preferred embodiments can be implemented with a software application (*i.e.*, computer-readable program code) running on a processor of a general-purpose computer. Alternatively, some or all of the

functionality of the application can be implemented with application-specific hardware components. For simplicity, the term "application" shall be used herein to refer generally to the entity (be it software and/or hardware) used to implement the preferred embodiments described below. The term "tool" shall be used interchangeably with the term "application."

Turning now to the drawings, Figure 1 is an illustration of a display output of an application of a preferred embodiment. Here, the application displays two display regions 100, 200. As used herein, the term "display region" refers to an area of display on one or more display devices (*e.g.*, computer monitors). Each display region 100, 200 can be a separate window, or the display regions 100, 200 can be different areas in a single window. The first and second display regions 100, 200 can be fixed or movable and can be non-overlapping (as in Figure 1) or can overlap each other. Additionally, the first and second display regions 100, 200 can be alternately shown (one than the other) in response to a command from the application and/or in response to a command from the user. The first display region 100 will sometimes be referred to herein as the "Structure Window," and the second display region 200 will sometimes be referred to herein as the "Script Window."

As shown in Figure 1, the application displays a flowchart 150 in the first display region 100. As used herein, the term "flowchart" refers to a series of linked graphical symbols or cells. The lines in the flowchart show how the cells are interconnected, and the cells are arranged in the flowchart in the order in which they are traversed in operation. The first display region 100 is referred to as the "Structure Window" because it displays the graphical representation (*i.e.*, the cells and the connecting lines) of the flowchart 150. In Figure 1, the flowchart 150 is displayed in its entirety in the first display region 100. It should be noted that a flowchart is displayed in the first display region 100 even if only part of the flowchart is visible at one time in the first display region 100. For example, if the flowchart were larger than the first display region 100, only a portion of the flowchart would be visible in the first display region 100. In this situation, a scroll bar and/or other navigation devices can be provided in the first display region 100 to allow a user to select which part of the flowchart is visible.

The flowchart 150 in Figure 1 comprises a plurality of cells (cells 1-12), some of which are rectangular-shaped and others of which are diamond-shaped. The rectangular-shaped cells are referred to herein as “simple cells,” and the diamond-shaped cells are referred to herein as “conditional cells.” A simple cell is a cell that contains a single branching link to a single cell. For example, in the flowchart 150 shown in Figure 1, simple cell 4 branches to conditional cell 5, and simple cell 6 branches to simple cell 8. Unlike a simple cell, a conditional cell contains multiple branching links to multiple cells. The branching links are associated with conditions necessary for that branching link to be followed. For example, in the flowchart 150 shown in Figure 1, conditional cell 5 branches to simple cells 6 and 7. The branch to simple cell 6 is followed if the condition “male” is true, while the branch to simple cell 7 is followed if the condition “female” is true. It should be noted that a cell can contain two or more individual cells (simple cells or conditional cells). Such a cell is referred to herein as a “group cell” and can be used to simplify the display of a flowchart by grouping multiple cells together in a single cell. In addition to simple and conditional cells, a group cell can contain other group cells (*i.e.*, groups cells can be nested) and other types of cells, such as “go to” cells, “alias” cells, and other types of cells described in the next paragraph. “Go to” cells can be used instead of a line to show the flow from that cell to another cell. In this way, “go to” cells can be used to keep a flowchart clean and readable. “Alias” cells can be used to mimic the function/operation of another cell.

The cells in a flowchart can contain any suitable content. For example, as in a traditional flowchart drawn on paper, a cell can contain text. A cell can also contain instructions that are implemented by the application (or by another application) when the cell is “played.” For example, a cell can contain an instruction to trigger a piece of media, gather user input, generate visual or oral information, send/receive information or media to a database, process data, perform a calculation, or perform other functions, such as describing how and when media should be played. Examples of media assets include, but are not limited to, digital audio/video objects representing still art, animation, graphics, on-screen text, music, sound effects, or voiceover dialog. Different cells can have different durations. For example, some cells can be played after a previous cell

initiates its function, while other cells can be played after a previous cell finishes its function. (The timing of a cell can also be based on a time X before or after the beginning or end of a cell, and one cell can be played simultaneously with another cell. Timing can also be based off of a common clock. Other timing mechanisms can be used.) A cell can also provide selection choices to a user and evaluate which choice was selected. For example, when conditional cell 2 in Figure 1 is played, the user is prompted to input "yes" or "no" using a user interface device, such as a keyboard, mouse, microphone, remote control, or any other type of device. Conditional cell 2 also determines whether the user input is "yes" or "no." If the user input is "yes," the branch leading to cell 4 is followed, and the application runs a file called "Senior Citizen animation."

When played, the cells in the flowchart 150 of Figure 1 provide an interactive multimedia experience for a user. In this example, the interactive multimedia experience takes the form of an interactive conversation interface in which responses are collected from a user using an interface that simulates a real-life conversation. When the flowchart is played from its beginning, the user first hears a voice asking whether the user is over 30. Depending on the user's response, an animation of a school kid or an animation of a senior citizen is played. If the user is over 30, the user is also asked if the user is male or female. If the user is male, an audio file voicing the phrase "Howdy Grandpa" is played; if the user is female, an audio file voicing the phrase "Hi there Grandma" is played. The interactive conversation interface can be used to communicate ideas and information in an audio and/or visual environment, such as interactive computer games, commercials, guided tours, auctions, stories, and news, health, or financial services. The interface can be implemented with wired or wireless equipment that includes both audio and video output devices (such as a home computer or television) as well as with equipment that includes only an audio output device (such as a conventional telephone) or only a video output device. It is important to note that these preferred embodiments can be used in flowchart applications that are unrelated to an interactive multimedia experience. Accordingly, a specific type of cell should not be read into the claims unless explicitly recited therein.

Returning to Figure 1, the second display region 200 (the Script Window) contains a textual view 250 of some of the cells (cells 1, 2, 4, 5, 7, 8, 9, and 12) in the order in which the cells appear in the flowchart 150. The textual view shows a “description” of a cell (*e.g.*, the text that is contained in a cell, the line of dialogue that will be voiced, the description of the animation or of the SFX that will be played, etc.). The content displayed in the textual view 250 can also contain other cell “properties,” such as the font of displayed text, the name of the actor who will provide the media content, the cell’s timing relative to other cells, the volume at which audio content of the cell should be played, the frames per second of animation, and other information. Cell properties can also be displayed in a third display region. It should be noted that the “textual” view can also contain graphics. For example, the textual view 250 in Figure 1 contains radio buttons. As another example, text of the cell can also be supported with a graphics button next to the text that indicates the type of media in the cell (*e.g.*, a button with a little horn indicating a SFX) and is clickable to open a properties window of the cell, to playback the media, or to perform other functions.

Embodiments Related to Identifying Cells in a Path in a Flowchart

Cells 1, 2, 4, 5, 7, 8, 9, and 12 in Figure 1 represent one of many paths in the flowchart 150. As used herein, the term “path” refers to at least two cells in the flowchart that are connected to each other. In Figure 1, the path contains the first and last cells in the flowchart 150 (cells 1 and 12). However, a path does not necessarily need to include the first and/or last cells. When a flowchart contains many paths, it can be difficult for a user to follow the cells along a single path, and cells along a path can be identified in a way to assist a user in following the path in the flowchart. In Figure 1, cells along a path are identified by displaying the lines linking the cells differently (*e.g.*, in a different color, shading, or thickness) than the lines linking cells that are not along the path. (In Figure 1, the selected path is the lightest path.) Additionally, the content of the cells along the path is displayed in the second display region 200 to allow a user to read through the content of those cells in isolation from the cells in the other paths. As described in more detail below, other techniques can be used to identify cells along a path. For example, the

borders of the cells along a path and their branches can be displayed with thicker lines in the first display region 100.

To identify cells in a path, a user can individually select each of the cells along a desired path. With reference to the illustration in Figure 1, this would require a user to individually select cells 1, 2, 4, 5, 7, 8, 9, and 12. As can be seen even from the simple flowchart 150 in Figure 1, individually selecting cells along a path can be time consuming. To facilitate the selection of a path in the flowchart, the application preferably implements a method to identify cells in a path based on the selection of a single cell. With this method, after the application displays a flowchart, a user selects a single cell. In the flowchart 150 displayed in Figure 2, a user uses a pointing device (such as a mouse or trackball) to move a pointer 30 over a desired cell in the flowchart 150 and then selects that cell by pressing a selector switch (such as the mouse button). The user can select a cell using any other type of user interface device. For example, if the cells are numbered, the user can select a cell by typing in the cell number using a keyboard or by speaking the number of the cell into a microphone. Additionally, instead of the user selecting a cell, the application can automatically select a cell (*e.g.*, based on the output of some operation being run by the application or based on the output sent to the application by another application). In this example, cell 3 is selected.

Next, the application determines a path comprising the selected cell. In this preferred embodiment, the selection of a single cell is used to isolate the cells above and below the selected cell to form a single path based on the history of the cell and the history of the cells above and below it in succession. In operation, the application builds a path by determining which cells above and below a given cell were selected the last time that the given cell was selected. A path made from cells selected in this manner is referred to herein as "the last selected path." The operation of this preferred embodiment will now be illustrated in conjunction with Figures 1 and 2. When a user selects cell 3 in Figure 2, the application "walks" the flowchart to identify the cells below and above the selected cell. The application recognizes that cell 3 is the last cell in the path because there are no cells below cell 3 in the flowchart 150. Additionally, the application remembers that the last time cell 3 was selected, cell 2 was in the selected path directly

above cell 3, and that the last time cell 2 was selected, cell 1 was in the selected path directly above cell 2.

After the path has been determined, at least some of the cells in that path are identified. In Figure 2, the lines linking the cells in the path are different from those linking cells that are not in the path. Of course, other techniques of identifying the cells can be used. For example, cells can be displayed in a different color or otherwise highlighted, such as when the borders of cells in the determined path are displayed with thicker lines. Additionally, cells can be identified by changing their size with respect to other cells, such as when the identified cells are enlarged and/or the other cells are reduced in size. The application can also temporarily align the identified cells vertically to create the appearance of an additional display area in the first display region 100. In Figure 2, the cells in the path are also identified by displaying a textual view of the cells in the second display region 200. It should be noted that while Figure 2 identifies the cells along the path in two ways (by displaying the lines linking the cells in the path differently and by displaying a textual view of the cells in the second display region 200), the path can be identified using only one of these techniques or by using an additional technique. For example, a copy of the flowchart 150 can be displayed where only the cells in the path are visible and the cells that are not on the path are hidden.

Returning to the drawings, Figure 3 shows the display output after the user connects cell 3 to cell 8. Cell 8 is now the selected cell by virtue of it being the end of the new connection. The application remembers that the last time cell 3 was on the selected path (see Figure 2), cell 2 was in the selected path directly above cell 3, and cell 1 was in the selected path directly above cell 2. The application also remembers that the last time cell 8 was on the selected path (see Figure 1), cell 9 was in the selected path directly below cell 8, and the last time cell 9 was on the selected path (see Figure 1), cell 12 was in the selected path directly below cell 9. The cells along this determined path are identified as before. Assume that the user now selects cell 10 (see Figure 4). The application determines that the path above cell 10 is the same as before, and, since there are no cells below cell 10, the selected path ends at cell 10.

In this example, if the user selects any cell along the currently-selected path (*e.g.*, cell 9 in Figure 4), the selected path does not change. If, however, the user selects a cell not along the currently-selected path, such as cell 5, the application will remember that (1) the last time cell 5 was on the selected path (see Figure 1), cell 4 was in the selected path directly above cell 5; (2) the last time cell 4 was on the selected path (see Figure 1), cell 2 was in the selected path directly above cell 4; and (3) the last time cell 2 was on the selected path (see Figure 4), cell 1 was in the selected path directly above cell 2. The application also remembers that (1) the last time cell 5 was on the selected path (see Figure 1), cell 7 was in the selected path directly below cell 5; (2) the last time cell 7 was on the selected path (see Figure 1), cell 8 was in the selected path directly below cell 7; (3) the last time cell 8 was on the selected path (see Figure 4), cell 9 was in the selected path directly below cell 8; and (4) the last time cell 9 was on the selected path (see Figure 4), cell 10 was in the selected path directly below cell 9. The cells on this path are identified in the first display region 100 and the second display region 200 as shown in Figure 5.

There are several alternatives that can be used. For example, instead of selecting the last selected path, a path can be determined based on the most-frequently selected path containing the selected cell. Other methods can be used. For example, of the many paths that contain the selected cell, the application can choose the path that most recently contained the selected cell. As another example, the application can randomly determine a path comprising the selected cell or can semi-randomly determine a path comprising the selected cell, such as when part of the path is selected based upon some form of logic (*e.g.*, most frequently selected links three cells above and below the selected cell), but the rest of the path is selected at random (*e.g.*, all other links are selected randomly).

In the embodiment discussed above, all of the cells in a path are determined, and all of those cells are identified. In one alternate embodiment, all of the cells in a path are determined, but only some of those cells are identified. For example, for a determined path that contains both a beginning cell and an end cell, the beginning cell and/or end cell need not be identified along with the other cells in the path. In another alternate embodiment, only some of the cells in a path are determined. For example, if cell 5 in

Figure 4 is selected, instead of determining which cells are both above and below cell 5 on the path from the first cell to the last cell in the flowchart, the application can determine, for example, only the cells in the path that are above cell 5, only the cells in the path that are below cell 5, or only the cells that are X cells above and below cell 5. Some or all of these cells in the determined path can then be identified.

In another alternate embodiment, instead of selecting a single cell in the flowchart, at least one additional cell is selected, and the application determines a path comprising the selected cell and the at least one additional cell. In a variation of this alternate embodiment, a user can establish a “master” cell and then select one or more additional cells. The application would then find a path between the master cell and the selected cell(s). Additionally, a path can be determined “manually” when the path determined by the application is merely a plurality of cells selected by a user.

Instead of determining a single path comprising the selected cell, some or all of the possible paths can be determined. One or more of these paths can be selected, and at least some of the cells in the selected path(s) can be identified. For example, the application can display the cells of every possible path that can lead up to and out of a selected cell, and a user could additionally select from a pop-up menu to make one or more paths pop-out. In another alternative, in addition to the single path, the application can determine N additional path(s) comprising the selected cell. At least some of the cells in each of the determined paths can be identified. In this way, the application can display the cells of the last three selected paths coming in to or out of a selected cell (*e.g.*, the textual view can show three columns, with the most current path displayed in the left-most column). As another example, when selecting a “new” current path, the cells of the “last” path can remain displayed (*e.g.*, in a different color). In this way, there are always at least two selected paths, and the cells in the last path are identified along with the cells in the new path.

In yet another alternate embodiment, an additional display region (an “Adjacencies View”) displays a textual view of all the cells that lead into a selected cell and all the cells that lead out of it (*i.e.*, the cells that fan-in/fan-out from the selected cell). The top row displays the content of the fan-in cells, the middle row displays the content

of the selected cell, and the bottom row displays the content of the fan-out cells. In still another alternate embodiment, the application displays another display region that plays the output of the cells in the flowchart one cell at a time as the cells are played back. When a conditional cell is encountered, a user is prompted for input, and cells along the corresponding branch are played. The application remembers the cells that were played back and can identify some or all of these cells in the structure and/or script views.

Embodiments Related to Synchronizing

Graphical and Textual Views of a Flowchart

In creating a flowchart, the content of the cells can be entered in the flowchart itself. For example, a rectangular-shaped cell can be created, and a user can type text directly in that rectangular-shaped cell. Entering text in this manner can be difficult for some users. To overcome this problem, the preferred embodiments described below provide a text-entry process to drive the creation and modification of a flowchart. By way of overview, the application displays two display regions: one displaying a graphical view of a flowchart and the other displaying a textual view of at least some cells in the flowchart. In response to input received in either the first or second display regions, the application applies the input to both the first and second display regions, thereby synchronizing the graphical and textual views of the flowchart. Figures 6-11 will now be discussed to illustrate the operation of this preferred embodiment in creating a flowchart by incrementally entering data in cells along a path in the flowchart.

To create a flowchart, a user first creates a new project by selecting "New" from the File menu. After the user names the file, the application then presents two display regions: a Structure Window 110 and a Script Window 120 (see Figure 6A). As in the embodiments described above, the Structure Window 110 is used to display a graphical view of a flowchart, and the Script Window 120 is used to display a textual view of at least some cells in a single path in the flowchart. In this embodiment, a user can create and manipulate cells in either the first or second display regions 110, 120. When a blank document opens, a "Next Cell Prompt" (NCP) is displayed, and the user enters the type of cell he wishes into the NCP. In this example, the user typed "D" to create a simple cell (see Figure 6B). The user then can immediately start typing dialogue or other information

into the simple cell. As shown in Figure 6B, the user typed the dialogue “Are you over 30?” for the Host. In this preferred embodiment, while in a simple cell, hitting the return (or enter) key enters the text typed into the Script Window 120 into the corresponding cell on the Flowchart Window 110 and brings up another NCP in the Script Window 120 underneath the current text. In an alternate embodiment, the text typed into one window is simultaneously applied to the other window.

With reference again to example illustrated in Figure 6B, the user next types “C” in the NCP to create a conditional cell. As shown in Figure 7, the user can optionally create a label for the conditional cell (*e.g.*, overThirty). The label can be used as a variable name into which user input is stored. For example, after the user responds to the “Are you over 30?” question, the variable <<overThirty>> will have a value of either “yes” or “no.” As another example, when a conditional cell is labeled “male or female,” the conditional cell can select a branch based on which value (male or female) is stored in the “male or female” variable in a database. With reference again to Figure 7, the user then types in the conditions for the conditional cell (no, yes).

In this embodiment, the application assumes the writer wants to continue writing along the path of the last condition entered. The user continues creating cells along the path, as shown in Figures 8 and 9. To return to the “no” condition specified in cell 2 and create cells along that path, the user can either click on the “yes” radio button in the Script Window 120 or click on the cell below the “no” arrow in the Flowchart Window 110. The user can then add cell 3 to the flowchart, as shown in Figure 10. Note that in this embodiment, the Script Window 120 shows only cells along a single path. Accordingly, only cells 1, 2, and 3 are shown in the Script Window 120 in Figure 10. When the user selects cell 8, for example, the application determines the last-selected path using the embodiments described above, and the Script Window 120 resets itself to show this single path leading down to cell 8 (as shown in Figure 9).

If the user then wants to delete cell 4, for example, he can click on the text box in the Script Window 120 for cell 4 (or the same cell in the Structure Window 110) and hit delete. Cell 4 is then deleted from both the Script Window 120 and the Structure Window 110. Depending on how the user has set his preferences, the application can

automatically attach the cell above the deleted cell (cell 2, condition=yes) to the cell below the deleted cell (cell 5), as shown in Figure 11. The application can contain similar functionality for copying or cutting a cell from one part of the flowchart and pasting it elsewhere. Additional functionality includes, but is not limited to, editing a cell, adding a cell, deleting a cell, adding a link between cells, removing a link between cells, adding conditional branch(es), and deleting conditional branch(es). For example, to attach a cell manually to another cell, a user can click on the first cell, drag a line out of that cell, and “drop” the end of the line on the other cell. A link is then made between the two cells. As another example, to delete a link, a user can grab the arrow going into a cell, drag it off the cell, and drop it on the open flowchart. Alternatively, the user can right-click on the line and choose a “remove link” option from a pop-up window.

As described above, the functions applied to the Script Window 120 (or the Structure Window 110) are mirrored in the Structure Window 110 (or the Script Window 120). For example, if a user selects a cell on the Script Window 120 and issues a command to insert a cell, the cell will be inserted into both the Structure Window 110 and the Script Window 120 below the currently-selected cell. Similar to the ability to split a paragraph in two in a word-processor, the user can highlight part of the text within a cell in the Script Window 120 and issues a command to insert a cell, and the application will create a new cell attached to the current cell with the highlighted text. If the highlighted text includes the first character of that text, the cell is preferably inserted above the current cell; otherwise, it is preferably inserted below. It should be noted that connecting a cell from one branch of the flowchart to an entirely different branch may require the user to define the path on the Structure Window 110. However, the flow between such connected cells will appear as a single path in the Script Window 120.

There are several advantages associated with this preferred embodiment, especially if the application is used to write and edit copy for an interactive multimedia experience. Interactive multimedia experiences are often written by writers who are more accustomed to using a word processor to type in a story than using a tool to create a flowchart. With this preferred embodiment, the writer can focus primarily on developing content in the Script Window 120 (as he would if he were using a word processor), while

the application automatically creates and modifies the graphical view of the flowchart in the Structure Window 110. Additionally, from the writer's standpoint, it can be extremely difficult to visualize the linear flow through an experience by viewing the graphical view of the flowchart. A typical interactive multimedia experience consists of many prompts and decision logic after each prompt, with each decision producing a branch leading to additional processing steps. These large branching structures can be difficult to design and produce due to the unwieldy nature of the flowchart and writing tasks. The complexities of determining and managing the branching structures of a flowchart can pull creative focus away from developing its content because it is mechanically difficult to harmonize the content and the structure of an interactive program the way a great screenplay harmonizes every line of dialogue with the plot and vice-versa. However, the quality of the experience will be largely determined by whether the writer takes into account all of the possible paths and makes them flow seamlessly. Providing a Script Window 120 that at any one time represents the flow through a single path addresses this problem by making it easy for the writer to read and write each path as if it were a normal sequential storyline.

There are several alternatives that can be used with these preferred embodiments. For example, while the first and second display regions 110, 120 were displayed simultaneously in the example described above, in an alternate embodiment, the first and second display regions 110, 120 are displayed at different times. In another alternate embodiment, instead of applying the input to both display regions simultaneously, the input is applied first to one display region and later to the other. Additionally, instead of or in addition to using the keyboard, a user can use a mouse (or other pointing device) and menu selections to execute equivalent operations. However, some operations may only be available in the Structure Window 110. For example, a user can connect a branch in one area of the flowchart to another part of the flowchart by using a mouse to drag a connector line in the Structure Window 110 since only a single path is visible in the Script Window 120 at one time in this embodiment. Of course, provisions can be made for this functionality to be executed in the Script Window 120 as well.

In yet another alternate embodiment, instead of or in addition to using the Script Window 120 to edit cells, a user can edit the content and/or properties of cells in the flowchart displayed in the Structure Window 110. Accordingly, the Script Window 120 can drive the Structure Window 110 or vice versa. In this way, the designer can build an interactive multimedia experience by editing nodes in the graphical flowchart or textual specifications in a textual view. For example, cells on a selected path can be enlarged to allow a user to easily see the flow of the path and edit the contents of the cells on the flowchart itself. In this way, a user can create a cell in the graphic flowchart view, enter script in the enlarged cell, hit return, and have that cell appear in the textual view of the cell to see the single path flow. As noted above, the cells of the selected path can temporarily align themselves vertically to create the appearance of the Structure Window 120. Additionally, a third display area can be provided for receiving user input, and the application can apply the input received in the third display area to the Structure and Script Windows 110, 120. The third display area can take the form of a "properties window" that displays and allows a user to edit the properties of the cell such as script description, timing properties, and visual display properties.

As noted above, as the user clicks on different nodes in the flowchart, the application shows the currently-selected path in the Script Window 120. Preferably, the application uses the single path selection technique discussed above to "remember" the last selected path leading in to and out of the selected cell. It should be noted, however, that these preferred embodiments can be used without the single path embodiments discussed above. Additionally, any of the alternatives discussed above with respect to path selection can also be used with this preferred embodiment. For example, instead of displaying a textual view, the second display region 120 can display a copy of the flowchart where only the cells in the selected path are visible and the cells that are not on the path are hidden. In this way, the second display region 120 would display a graphical view of one path in the flowchart in isolation. The user can then create or edit cells on this graphical view. Additionally, the cells along a path can be identified in any other manner to allow a user to perceive and edit cells along that path. For example, the cells along a path can be displayed larger than the other cells in the flowchart. Here, the

“second display region” (the display area occupied by these larger cells in the flowchart) is part of the first display region.

In another alternate embodiment, the application can be equipped with various functionality to allow it to facilitate the construction of the media assets scripted by the writer and for providing the programming necessary to fully render the interactive multimedia experience on a given platform. As noted above, cells can contain instructions to play a media asset such as an audio file or a video file. When a writer is scripting the content of the interactive multimedia experience, those media assets may not exist. The application can sort the various pieces of uncreated media based on the talent that is necessary to create the media or on other criteria for sorting. For example, the cells can be divided into music tasks, animation tasks, art tasks, programming tasks, SFX tasks, writing tasks, video tasks, and performance tasks. In this way, artists used to create the media can be assigned a list of tasks that need to be performed. When each of the media assets is created by the artists and inserted into designated “slots” in a database, the application can assemble the completed media for playback. The slots in the database can be created before or after the media assets are created. Because an interactive multimedia experience can have thousands of assets and a non-linear structure, it is preferred that the application maintain a database to track the media assets.

The application can also allow the writer to guide the various artists with annotations as to how the media should be rendered or performed. This process is analogous to a scriptwriter’s comments regarding stage directions or other production issues in a play. The application can also produce cue cards that guide the talent in the performance and recording of the media. For other types of media, the writer can create preliminary versions of animations, music, etc. as guides for the creative staff when they are creating final versions. The application can also be used by the talent to record the media. For example, an integrated audio recording tool can be provided that assists the talent and producer in capturing the audio, still images, animation, etc., performing post-processing, and storing the media in an asset database. The audio recording tool can also show the points in the audio that precede and succeed a performance, making it easier for

the performer to ensure seamless transitions. The talent can also enter comments back to the writer regarding issues that might arise in the performance.

Finally, it should be noted that a path can contain additional cells that are determined using techniques in addition to the ones described above. For example, if the techniques described above generate a path that contains an endless loop, the path can be modified to show a path out of the endless loop. As another example, a path can be expanded to include "dead-end" cells that are simultaneously triggered by a cell in a path. These dead-end cells can, for example, play sound effects or animation when a cell on the determined path is played.

The CD-ROM appendix contains a computer program listing for a presently preferred embodiment.

It is intended that the foregoing detailed description be understood as an illustration of selected forms that the invention can take and not as a definition of the invention. It is only the following claims, including all equivalents, that are intended to define the scope of this invention.